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ABSTRACT

This report describes activities and achievements of a project that developed and evaluated the Demand Writing Instructional Model (DWIM), a comprehensive writing program for students with learning disabilities (LD) and low-performing students from culturally and linguistically diverse backgrounds in inclusive general education classrooms. The DWIM incorporates such research-based instructional practices as learning strategies instruction, prewriting planning instruction, text-structure instruction, and a process approach to writing. Three fifth-grade classes received the DWIM program and were compared to two other fifth-grade classes. Program effectiveness data focused on writing measures related to improving students' writing performance on the statewide writing assessment. These included measures associated with writing strategies, holistic writing measures, other writing measures, writing-affect measures, and social validity. Students in the experimental group made significant gains from pre-test to post-test and in relation to the comparison groups. One experimental group earned mean scores within the satisfactory level on the statewide assessment. Although results for the experimental LD students were positive, there were no significant differences between experimental and comparison LD students on the statewide writing assessment. Eight appendices include a sample lesson plan, detailed scoring procedures, sample anchor papers, a sequence of instruction, and statistical data. (Contains approximately 120 references.) (DB)

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The Demand Writing Instruction Model: Helping Students with Disabilities Pass Statewide Writing Assessments

Final Report

Student-Initiated Research Project
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ABSTRACT

The purpose of this study was to develop and evaluate the Demand Writing Instructional Model (DWIM) as a comprehensive writing program for students with learning disabilities (LD) and low-performing students from culturally and linguistically diverse backgrounds in inclusive general education classrooms. The DWIM incorporated a number of research-based instructional practices such as learning strategies instruction, prewriting planning instruction, text-structure instruction, and a process approach to writing. Additionally, the instruction was designed to address the needs of low-performing students from culturally diverse backgrounds who have differential cognitive styles.

The study was conducted in five, 5th-grade classrooms with approximately 113 students (including 14 students with LD). The study utilized a comparison-group design whereby three of the classes received the experimental instruction (the DWIM), and two classes served as the comparison group. Data were collected to evaluate the effectiveness of the DWIM relative to improving students' writing performance on the statewide writing assessment, measures associated with writing strategies, holistic writing measures, other writing measures, writing-affect measures, and social validity.

The results indicated that students in the experimental groups made substantial mean gains from pretest to posttest on the majority of the writing measures, which resulted in significant differences between their posttest scores and the posttest scores of the students in the comparison group. Furthermore, students in one treatment group of the experimental condition earned overall mean scores within the *satisfactory* level (between three to four points on a five-point scale) on the statewide writing assessment. The results for the experimental students with LD were less dramatic. Although they made moderate gains from pretest to posttest, the students with LD earned lower posttest scores on the writing measures than students without

disabilities, and their scores did not approach the mastery level on several measures. There were also no significant differences between the subgroups of students with LD on the statewide writing assessment. These results support the notion that students with LD require more intensive and/or specialized instruction than what was provided in this study if they are to master writing skills at the level required by a statewide writing assessment.

CHAPTER ONE

Introduction

The 1997 Reauthorization of the Individuals with Disabilities Education Act (P.L. 107-15) mandated the participation of students with disabilities in the general education curriculum (Goertz, McLaughlin, Roach, & Raber, 2000) and dictated that students with disabilities be included in district and statewide assessments and in accountability programs (Kearns, Kleinert, Clayton, Burdge, & Williams, 1998; Kleinert, Kennedy, & Kearns, 1999). Furthermore, the 1994 Improving America's School Act required that the performance of students with disabilities on statewide assessments be reported as part of the overall results for all students (Kampfer, Horvath, Kleinert, & Kearns, 2001).

Prior to the passage of these two acts, the states had already begun to develop curriculum standards and assessments programs. Currently, all states have curriculum standards, and 48 states have adopted their own system of statewide assessments (Council of Chief State School Officers, 1998). Eighteen of these states have adopted a high-stakes assessment policy basing student promotion and/or graduation solely on students' performance on the state assessment, and the trend towards high-stakes assessments appears to be increasing rapidly (Olson, 2000a). Of the 48 states that have statewide assessments, almost all assess mathematics and reading (47 and 46 states, respectively), and 35 states assess writing and science (Council of Chief State School Officers, 1999).

The participation of students with disabilities in the general education curriculum and in statewide assessments has had significant implications for students with high-incidence disabilities and especially for students with learning disabilities (LD) since they comprise over 51 percent of the students being served in special education (U.S. Department of Education [USDE], 1995). The mandates of P.L. 107-15 has resulted in a significant proportion of students with LD receiving their

instruction in the general education classroom where they are expected to meet the same academic standards as their peers without disabilities. In many cases, depending on their Individual Education Plans (IEPs), students with LD are eligible to take the standard state assessment exams in all content areas with appropriate accommodations (National Center for Educational Outcomes, 1999). However, a sizable proportion of students with disabilities have failed state assessments in several states (Olson, 2000a). For example in 1997, 21 percent of the students in special education (including students with LD) in Indiana were not able to pass the exam to graduate from high school which prompted a class-action lawsuit against the state (Olson, 2000b). In 2001, 91 percent of students with disabilities in California (including students with LD) failed the math section, and 82 percent failed the language arts section of the high school exit exam (Egelko, 2002). Additionally, the National Center for Educational Outcomes reported that in 17 states, there was a substantially smaller percentage of special education students than general education students who met state standards (Ysseldyke, Thurlow, Langenfield, Nelson, Teelucksingh, & Seyfarth, 1998).

Typically, students are assessed in traditional subjects such as mathematics, reading/language arts, writing, science and social studies. There are five types of assessments exams used across the states: (1) norm-referenced tests, (2) criterion-referenced tests, (3) performance assessments, (4) portfolio assessments, and written assessments.

The most common form used for written assessments is the extended-constructed response (i.e., short essay) (Council of Chief State School Officers, 1999). The ability to respond to a written prompt and write a personal narrative essay *on demand* (within a specified amount of time and under the constraints of a testing situation) was also expected on the elementary writing assessment in several states. This unique testing format has had implications for students with LD because specific

assessment accommodations such as changes in the presentation or response format have not been validated nor made available for this type of assessment (Tindal, Heath, Hollenbeck, Almond, & Harniss, 1998).

In a detailed review of standards from seven states, McDonnell, McLaughlin, and Morrison (1997) found that developing writing skills was important because the expectation to write was heavily integrated throughout the curriculum. They reported that among the states' writing benchmarks and indicators for third to fifth graders, students were expected to: (a) write in different genres, (b) write for a variety of purposes and audiences, and (c) demonstrate basic writing conventions such as grammar, spelling, and logical and persuasive communication.

Unfortunately, the average writing proficiency of elementary students across the states has been well below the states' writing standards. Elementary students at large (including students with disabilities) are not doing well on writing assessments across the nation (USDE, 1996). In the 1997 *Condition of Education*, the National Center for Education Statistics reported that in 1994, the average writing proficiency score for fourth graders was 205 (on 500-point scale). This score indicated that the students' average writing ability was at a level of "incomplete and vague writing" (USDE, 1996). Caucasian students outscored African-American and Hispanic students with average proficiency scores of 214, 173, and 189, respectively.

More recently in 2000, fifth graders in Kansas were found to fare poorly on the statewide writing assessment. Students were expected to write a personal narrative essay in response to a writing prompt, and they were evaluated across the Six Traits of Writing (on a five-point scale rubric)(Kansas State Department of Education website, 2002). Across the state, only 17 percent of all fifth graders (including students with disabilities) received an overall mean score at the *proficient* level, and 8 percent received an overall mean score at the *advanced* level. The majority of the

students received overall mean scores at the *satisfactory, basic*, and *unsatisfactory* levels (35%, 38%, and 16% respectively).

The scores of students from diverse cultural groups were significantly lower than those of the Caucasian students in the general student population (Kansas State Department of Education website, 2002). For example, a large proportion of American-Indian, African-American, Hispanic, and Pacific-Islander students received overall mean scores at the *unsatisfactory* level (29%, 24%, 23%, 29%, respectively) and *basic* level (37, 36, 36, 17, respectively), and very few received scores at the *advanced* level (3%, 3%, 3%, 0%, respectively). In comparison, Caucasian students' scores in the *unsatisfactory, basic, and advanced* levels were 11 %, 27%, and 8% respectively. The scores of students who receive special education services (including students with LD) were even lower. Interestingly, there is also a performance gap between the scores of culturally-diverse students with disabilities and Caucasian students with disabilities. Over half of the American-Indian, African-American, and Hispanic students receiving special education services received overall mean scores at the *unsatisfactory* level (54%, 53%, 55% respectively) compared to 32 percent of the Caucasian students with disabilities. Thus, schools are faced with the potential challenge of increasing the writing performance of two groups of low-performing students: students with LD and students from culturally and linguistically diverse backgrounds.

The low performance of students with LD on statewide writing assessments is not surprising because they generally have severe writing deficits (Newcomer & Barenbaum, 1991), and their essays have been consistently judged to be of poorer quality than those written by students without LD (Graham & Harris, 1989). In this current era of educational reform and accountability, student knowledge of subject matter is commonly evaluated through written expression. Writing proficiency is expected across the general education curriculum, and students who struggle with

writing are often at risk for school failure and frequently referred for special education services (Reschly, 1992). In addition, difficulty in written language is commonly noted on the IEPs of students with LD at the elementary level (Marcoux, 2002). The writing deficits experienced by students with LD range from lower-order mechanical difficulties to higher-order cognitive and metacognitive problems (Newcomer & Barenbaum, 1991). Basic writing skills such as spelling, sentence formation, capitalization, and handwriting are especially problematic for students with LD (Graham, Harris, MacArthur, & Schwartz, 1991). They consistently struggle with writing complete and complicated sentences and correcting their writing errors (Kline, Schumaker, & Deshler, 1991; Schmidt, Deshler, Schumaker, & Alley, 1988; Schumaker, Deshler, Alley, Warner, Clark, & Nolan, 1982). Students with LD also lack strategies to handle all of the cognitive processes involved in writing (e.g., planning, organizing, revising) (Englert, Raphael, Anderson, Gregg, & Anthony, 1989). These students' limited proficiency in writing and their inability to demonstrate their competence through writing inhibits their access to the general education curriculum and contributes to their low performance on statewide writing assessments. Writing is an important life skill, and students who lack these skills are at risk for achieving success in secondary and postsecondary experiences including occupational success and independent living.

Although few instructional programs have specifically addressed the needs of students with LD to meet state writing standards and to respond to large-scale writing assessments, some research has been conducted on interventions that appear to be a promising part of a comprehensive writing program for these students (Danoff, Harris, & Graham, 1993; Kline et al., 1991; Troia, Graham, & Harris, 1999). These research-based interventions can be grouped into four broad categories: pre-writing planning instruction, text-structure instruction, learning strategies instruction, and a process approach to writing instruction.

Within pre-writing planning interventions, students with LD are taught how to plan before they write. In contrast to skilled writers, students with LD typically do little or no pre-writing planning (Graham & Harris, 1997; Thomas, Englert, & Gregg, 1987). Intervention studies for pre-writing planning have resulted in students with LD increasing planning time and the length of their essays, as well as making small improvements in the quality of their essays (e.g., Troia et al., 1999).

Within text-structure interventions, students with LD are taught the underlying narrative and expository text structures. Text structure refers to the organizational features in writing that serve as a frame or pattern (Englert & Thomas, 1987) that helps readers identify important information and make logical connections between ideas (Seidenberg, 1989). Writing interventions that involved the instruction of narrative-text structure have resulted in students with LD increasing the length of the stories and the number and quality of story grammar elements (e.g., Danoff et al., 1993).

Within learning strategies instruction, students are taught many of the strategies that they need to write complete sentences, organize the content, and detect and correct the errors in their writing. Example strategies for which instruction has been validated include the Sentence Writing Strategy (Schumaker & Sheldon, 1998), Paragraph Writing Strategy (Schumaker & Lyerla, 1991), Theme Writing Strategy (Schumaker, 2002), and Error-Monitoring Strategy (Schumaker, Nolan, & Deshler, 1985). Intervention studies focusing on writing strategy instruction have resulted i students with LD mastering these writing strategies and also improving their scores on a district-level writing assessment (e.g., Kline et al., 1991; Schmidt et al., 1988).

Within a process approach to writing instruction, students with LD are encouraged to go through the writing process at their own pace for authentic writing tasks (i.e., following their own interests). An example of a process approach to writing instruction is the Writer's Workshop (Calkins, 1985). Intervention studies that

have focused and/or integrated a process approach to writing instruction for students with LD have been successful in improving the overall quality of their writing on several variables (e.g., length, mature vocabulary) (Clippard & Nicaise, 1998; MacArthur, Graham, Schwartz, & Schafer, 1995).

These four types of writing interventions are promising and have been successful in improving the writing abilities of students with LD, but there are some major gaps and weaknesses related to the studies associated with these interventions. Although one study looked at effects related to district assessments and showed positive results for high school students with LD (Schmidt et al., 1988), no studies investigated effects related to large-scale writing assessments. Additionally, none of the studies were focused on the instruction of a comprehensive package of writing skills in general education settings with measured effects for the students with LD. Finally, no studies have specifically addressed the poor writing performance of students from culturally and linguistically diverse backgrounds and their low performance on large-scale writing assessments.

The challenge that schools face in improving the low writing performance of students from culturally and linguistically diverse groups is problematic because of the lack of intervention studies that specifically address the needs of these students and the underlying reasons for their poor performance. Several authors have suggested that students from culturally and linguistically diverse backgrounds often struggle in school because they have differential cognitive styles that tend to clash with the expectations, routines, and culture of the school (Boykin, 1992; Garcia, 1988; Harry, 1992; Moll; 1988; Weisner, Gallimore, & Jordan, 1988). They hypothesize that culturally and linguistically diverse students who have field-dependent cognitive styles are at-risk for low achievement in school because their cognitive styles are not compatible with the mainstream field independent-cognitive style on which most instruction is based (Tharp, 1989; Vogt, Jordan & Tharp, 1987).

Authors also suggest that when classroom instruction and social organization are compatible with the students' cultural cognitive style, improvements in learning and achievement can be expected (Deyhle, 1983; Elliot, 1976; Jordan, 1985). The major study in this area focused on an instructional program for children of Hawaiian ancestry. This program immersed students in specific literacy instruction and social organization that was compatible with their Hawaiian cultural norms. The data reported showed that the Hawaiian children who participated in the program approached national norms on standard achievement tests, while their counterparts enrolled in schools in which typical instruction was used performed much lower (Gallimore, Tharp, Sloat, Klein, & Troy, 1982; Klein, 1988). However, no studies of this kind have been conducted related to the writing performance of culturally diverse students from African-American, American-Indian and Hispanic backgrounds.

Thus, this study had two purposes. The primary purpose was to develop and test a comprehensive writing program in inclusive general education classes in order to impact the performance of students with LD on statewide writing assessments as well as other writing measures. The comprehensive program was called the Demand Writing Instruction Model (DWIM) and incorporated all four types of writing interventions (i.e., pre-writing planning instruction, text-structure instruction, learning strategies instruction, and a process approach to writing instruction).

The secondary purpose was to investigate the effects of the writing instruction for low-performing students from culturally and linguistically diverse backgrounds such as African-American, American-Indian, and Hispanic-American on statewide writing assessments as well as other writing measures. In order to impact these students, one form of the DWIM included instructional practices that were considered to be compatible with a field-dependent cognitive style, the cognitive style that a significant proportion of these students are presumed to have.

The following research questions were addressed:

1. Are there significant differences among the overall scores and individual Six Traits of Writing scores on statewide writing assessments of students who received the DWIM intervention and the students who received traditional writing instruction?
2. Are there significant differences among the overall scores and individual Six Traits of Writing scores on statewide writing assessments of students with learning disabilities (LD) who received the DWIM intervention and the students with LD who received traditional writing instruction?
3. Are there significant differences among the overall scores and individual Six Traits of Writing scores on statewide writing assessments of students with field-dependent cognitive styles (FDCS) who received the DWIM intervention and the students with FDCS who received traditional writing instruction?
4. Is there a significant difference between the posttest scores of students receiving the DWIM intervention and the students receiving traditional writing instruction on the following performance measures: (a) sentence-writing, (b) paragraph writing, (c) error monitoring, (d) theme writing, (e) overall writing quality, (f) inclusion of text structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) satisfaction?
5. Is there a significant difference between the posttest scores of students with LD receiving the DWIM intervention and the students with LD receiving traditional writing instruction on the following performance measures: (a) sentence-writing, (b) paragraph writing, (c) error monitoring, (d) theme writing, (e) overall writing quality, (f) inclusion of text structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) satisfaction?

6. Is there a significant difference between the posttest scores of students with FDCS receiving the DWIM intervention and the students with FDCS receiving traditional writing instruction on the following performance measures: (a) sentence-writing, (b) paragraph writing, (c) error monitoring, (d) theme writing, (e) overall writing quality, (f) inclusion of text structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) satisfaction?

CHAPTER TWO

Literature Review

The national school improvement effort, commonly referred to as the standards-based reform movement, has had a significant impact on most teachers and students in American schools (Howell & Nolet, 2000). The movement is focused on raising the achievement of *all* students, and central features include: (a) challenging content and student performance standards, (b) a public accountability system based on student assessments, (c) teacher accountability for student achievement, and (d) increased parent and community involvement (Nolet & McLaughlin, 2000). Currently, the majority of states have implemented curriculum standards and assessment programs. Presently, almost all of the states assess math and reading (47 and 46 respectively), while only two-thirds (35) of the states assess student writing (Council of Chief State School Officers, 1999).

The recent passage of the No Child Left Behind Act (P.L. 107-110) has further increased the pressure on schools to raise the academic performance of all students on large-scale assessments. Beginning in the 2005 school year, all states will be required to test third-through eighth-grade students (including students with disabilities) annually in math and reading as well as the English proficiency of students with limited English skills (Coile, 2001). However, as the focus on reading and math achievement has increased, the number of states who measure students' writing performance through large-scale assessments has declined over the years (Council of Chief State School Officers, 1999).

The lack of attention on writing is alarming because the results from both national and statewide writing assessments indicate that a significant proportion of American students (60-80%) need to improve their narrative, expository, and persuasive writing abilities (Applebee, Langer, Mullis, Latham, & Gentile, 1994; State Testing and Evaluation Center, 1995). Students with learning disabilities (LD)

have even more significant problems with written expression (Parker, Tindal, & Hasbrouck, 1991), and they are frequently referred for special education services because of their difficulties in both reading *and* writing (Reschly, 1992). Some of the difficulties in written expression that students with LD experience are: the inability to focus on one topic (Englert & Thomas, 1987; Graham & Harris, 1989), the inability to organize their writing and use organizational strategies (Englert, Raphael, Fear, & Anderson, 1988; Graves, Montague, & Wong, 1990), problems with writing mechanics and basic writing skills (Graham, Harris, MacArthur, & Schwartz, 1991;Thomas et al., 1987), ineffective revising and editing techniques, (MacArthur, Graham, & Schwartz, 1991), and motivational problems (MacArthur et al., 1995). The failure to focus on writing could further disadvantage students with LD in receiving much-needed instruction in written language. Additionally, since the nation appears to be moving towards using large-scale assessments as the primary indicator of school achievement (Mollison, 2002), evaluating their performance on large-scale assessments as an outcome measure for potential interventions seems necessary.

As noted above, students with LD clearly have difficulties with written expression. However, given the changes in student demographics and the disproportionate numbers of culturally and linguistically diverse students receiving special education services, there is also a growing need to address the challenges that schools and educators face with regard to teaching writing to low-performing students from culturally and linguistically diverse backgrounds. This is particular true in reference to enhancing the performance of these students on large-scale writing assessments (Kansas State Department of Education website, 2002; USDE, 1996). The reality of these circumstances must be confronted by educators and considered when developing effective interventions that focus on improving the writing performance of students with LD and low-performing students from culturally-diverse backgrounds. Therefore, this literature review will focus on two major areas

of research central to the study. The first discussion will address an array of issues relative to current writing interventions that have been the most effective with regard to improving the writing performance of students with LD. The second discussion will focus on the growing literature that suggests students from culturally diverse backgrounds have differential cognitive styles that may influence their low academic performance.

Writing Interventions for Students with Learning Disabilities

In response to the significant writing needs of students with LD, there has been an effort in the field of special education to design and validate the instruction of writing interventions for elementary and secondary students with LD. The goals of the interventions have been to improve the students' written language by providing them with a broad repertoire of writing strategies. The research-based writing interventions for students with LD that have emerged in the professional literature can be grouped into four broad categories: pre-writing planning instruction, text-structure instruction, learning-strategies instruction, and a process approach to writing instruction. The remainder of this section will address each of the four categories of interventions separately and characterize the empirical research that has been conducted with students with LD in each area.

Pre-Writing Planning Instruction

Within this type of intervention, students are taught how to set goals, generate ideas, and organize their ideas before they actually start to write. The pre-writing planning process also typically involves developing some sort of written plan (e.g., outline, story web, graphic organizer). Pre-writing planning interventions are based on the premise that skilled writers typically develop an initial set of goals to guide their writing and a plan to meet those goals (Flowers & Hayes, 1980). The literature in this area indicates that students with LD typically approach writing tasks without much thought or effort to pre-writing planning (Graham & Harris, 1997; Thomas et

al, 1987). They tend to view writing tasks as "telling what they know" with little regard to establishing goals for writing, organizing text, and meeting the needs of the reader (McCutchen, 1988). In contrast, skilled writers employ planning processes in their approach to writing (Graham & Harris, 1996).

Several studies have been conducted where researchers developed and utilized pre-writing planning instruction for students with LD (e.g., Sexton, Harris, & Graham, 1998; Zipprich, 1995). In one such study (Troia et al, 1999), three 5th-grade students with LD were individually taught methods for planning narrative and expository essays over a three-week period. Instruction in the planning strategies followed the Self-Regulated Strategy Development (SRSD) model (Harris & Graham, 1996), and the students were instructed to set goals, brainstorm ideas, sequence their ideas, and complete self-selected homework assignments (Troia et al, 1999). The intervention also included the use of acronyms and mnemonics to help students with the planning process. The results of the study indicated that after the intervention, the students dramatically changed their pre-writing planning behavior, and this favorably impacted their writing. Following instruction, the students increased their planning time and devoted as much time to their planning as they did to writing (Troia et al., 1999). With regard to their writing, the students increased the length of their stories and made an average gain of 3.1 points on their story-grammar scores (i.e. inclusion of basic story elements) from 7.1 at baseline to 10.2 at post-instruction (total possible score was 21 points). Additionally, the students were able to generalize these effects to writing persuasive essays and made an average gain of 3.8 points on the number of functional expository elements present (e.g., premise, line of argument) from 7.0 at baseline to 10.8 at post-instruction. These positive effects were maintained three weeks later. However, no effect sizes were reported to evaluate the significance of the students' gains, and the increased time spent planning only minimally impacted the overall low quality of the students' stories and essays. Furthermore, the study was

conducted with a very small sample size (three students) which threatens the external validity of the results.

In a related study (De La Paz, 1999) utilizing the SRSD model, six 7th-grade and 8th-grade students with LD were taught similar planning techniques for writing expository essays within a general education setting. The main difference in this study was that the students were taught how to plan for the writing genre (i.e., expository) and writing task used on the statewide writing competency test. The students were instructed by their general education teachers who followed scripted lesson plans. The intervention included strategies to help the students plan in response to the assessment prompt and to encourage them to continue planning while they wrote their essays. The results of the study indicated that after the intervention, all of the students generated pre-writing plans, and approximately half of the students' plans were appropriately relevant to the topic prompt (De La Paz, 1999). All of the students increased the length of their essays, and the students with LD increased the length of their essays by 250 percent. The students also doubled and/or tripled the average number of functional expository elements (e.g., premise, reason) present in their essays. These positive gains were maintained four weeks later. However, no effect sizes were reported to evaluate the significance of the students' gains. Although one of the primary goals of the intervention was to prepare students for the state's writing competency test, the students' performance on the statewide writing assessment was never reported.

The results of these and other related studies (e.g., Sexton et al., 1998; Zipprich, 1995) indicate that pre-writing planning instruction should be considered as an important component of a comprehensive writing program for students with LD. The students with LD in these studies were able to use the pre-writing planning techniques to help them organize and write narrative and expository essays. The increased planning time appears to be associated with gains in the length and

inclusion of functional essay elements in the students' stories and essays. However, the pre-writing planning was only minimally successful in improving the quality of the students' stories. The average gain in mean quality scores was .4 and the mean quality score was 3.5 (on an eight-point scale). Furthermore, the studies did not evaluate the impact of the planning interventions to actual student performance on large-scale writing assessments.

Text-Structure Instruction

Several writing interventions that utilize pre-writing planning instruction also incorporate text-structure instruction for students with LD (Danoff et. al., 1993; Graham & Harris, 1989; Wong, 1997). Within this type of intervention, students are explicitly taught the underlying text structures of various writing genres. For example within expository text, students are taught the different structures which includes description, sequence, enumeration, problem-solution, classification, illustration, procedural description, and compare/contrast (Meyer & Rice, 1984; Weaver & Kintsch, 1991). For narrative text, students are taught the story-grammar structure which consists of basic story elements such as character and problem (Mandler & Johnson, 1977; Stein & Glenn, 1979). Text-structure instruction is based on the premise that explicit instruction in the underlying text structures can improve the writing performance of students with LD (Fitzgerald & Teasley, 1986; Graham & Harris, 1989; Idol & Croll, 1987). The literature indicates that students with LD generally do not focus on text structures while reading and writing (Seidenberg, 1989), and stories written by students with LD frequently lack even the most basic story parts such as character and goals (Barenbaum, Newcomer, & Nodine, 1987).

Although text-structure instruction has typically been used to increase reading comprehension, there have been some studies where researchers utilized text-structure for improving the writing performance of students with LD (e.g., Englert, Raphael, Anderson, Anthony, and Stevens, 1991; Graham & Harris, 1989; Wong,

1997). In one such study (Graham & Harris, 1989), 22 students with LD in the fifth and sixth grades were taught narrative text-structure (i.e. story grammar instruction) in order to improve the overall quality of their stories. The students were instructed in small groups in their resource rooms on the following eight story-grammar elements: main character, locale, time, starter event, goal, action, ending, and reaction (Stein & Glenn, 1979). The results of the study indicated that after the intervention, the inclusion of total story-grammar elements (e.g., character, goal) at posttest, generalization, and maintenance was significantly higher than at pretest for 20 of the 22 students with LD. Additionally, there was no significant difference between the students with LD and the normally-achieving students on this variable. With regard to quality, the students with LD increased their average scores from 2.14 at pretest to 2.91 at posttest (on a seven-point scale). However, no effect sizes were reported to evaluate the magnitude of these gains. Furthermore, the ratings of the stories written by students with LD were significantly lower than those for the stories of the normally-achieving students.

In a related study (Wong, 1997), 15 students with LD in the 8^{th}, 9^{th}, and 10^{th} grades were taught how to write three different genres of expository essays (reportive, persuasive, and compare/contrast) over a three-year period (one per year). Within each intervention, the students were taught the functional elements within each genre, and they were also taught how to use a genre-specific planning sheet for each essay. The results of the study indicated that across the three types of essays, the students were able to increase their mean scores for writing clarity and other genre-specific variables (e.g., thematic salience, organization of ideas) from pretest to posttest (Wong, 1997). The calculated effect sizes of the students' pretest to posttest gains ranged from .95 to 2.74 over the three years. The *d* effect size was calculated by dividing the mean difference with the standard deviation, and *d* effect sizes greater than .8 traditionally represent large effect sizes (Green, Salkind, & Akey, 2000).

However, despite the impressive effect sizes, there were methodological weaknesses in the study. The researcher employed a control posttest-only design for two of the interventions, and there was no control group for the third intervention. The lack of appropriate control groups makes attributing the students' gains in writing to these interventions very difficult. Furthermore, the researcher did not include enough information in the study to ascertain whether the gains in writing were socially significant, and the data for individual students with LD were not reported.

In spite of the limitations noted in the studies reviewed, the results of these and other related studies (e.g., Englert et al., 1991) indicate that text-structure instruction has produced moderate effects on the writing performance of students with LD. The students with LD in these studies were able to use the knowledge gained during instruction to help them write narrative stories and expository essays. The text-structure instruction also appears to be associated with gains in the inclusion of functional essay elements and improving the overall quality of writing. Unfortunately, the text-structure instruction was not effective in improving the students' overall writing mechanics (e.g., spelling, sentence structures and punctuation). However, given that the state writing standards (and the statewide writing assessment) requires students to be able to write in different genres, text-instruction instruction is one component that should be considered when developing a comprehensive writing program for students with LD.

Learning Strategies Instruction

One type of intervention that has made an impact on students' overall writing mechanics is learning strategies instruction. The approach to instruction focuses on teaching students an array of targeted strategies for helping students with LD build a repertoire of strategies to respond to the demands of the general education curriculum. As part of the Learning Strategies Curriculum (Deshler & Schumaker, 1986), four learning strategies were designed to enhance the written expression

performance of adolescents with LD. The written expression strategies include the Sentence Writing Strategy (Schumaker & Sheldon, 1998), Paragraph Writing Strategy (Schumaker & Lyerla, 1991), Theme Writing Strategy (Schumaker, 2002), and Error Monitoring Strategy (Schumaker et al., 1985). Within learning-strategies instruction, students are taught how to write simple and complicated sentences, write paragraphs focused on one main topic, write essays containing several connected paragraphs, and correct basic writing errors (e.g., spelling, punctuation). Learning-strategies instruction is based on the premise that students with LD can better meet the demands of the general education curriculum by being taught *how* to learn and respond to academic tasks in a strategic and intensive instruction model. Many students with LD do not have appropriate writing strategies, or they lack the ability to use strategies to help them improve their writing (Newcomer & Barenbaum, 1991). The difficulties that students with LD face in coping with the writing demands of the general education curriculum supports the teaching of learning strategies. Fortunately, interventions that utilize learning-strategies instruction appear to be very effective in increasing the writing performance of students with LD.

There have been several studies conducted (e.g., Kline et al., 1991; Schmidt et al., 1988; Schumaker et al., 1982) to validate learning strategies instruction for adolescents with LD. Among these was a study in which seven high school students with LD were taught all four writing strategies (Schmidt et al., 1988). The students were instructed in their resource room, and then generalization procedures were implemented to help the students use the strategies in their mainstream English and social studies courses. The results of the study indicated that after review of the instruction, the students were able to improve their average scores on all of the writing measures from baseline (Schmidt et al., 1988). The students were also able to write at the same level in their mainstream classes (on at least one measure) as they demonstrated during instruction in the resource room. Seventy percent of the students

were able to maintain their writing performance on several measures at the mastery level during the summer. Furthermore, after the completion of the learning-strategies instruction, the students with LD earned high scores on a district-wide written language competency exam. The essays written by the students with LD who received all four writing strategies received a score of 3.5 (on a five-point scale) on both style and overall impression, while the essays written by the average students without LD received a score of 2.5 (Schmidt et al., 1988).

The results of research involving learning-strategies instruction (e.g., Kline et al., 1991; Schumaker et al., 1982) indicate their potential contribution as part of a comprehensive writing program for students with LD. The subjects in the Schmidt et al. (1988) study were able to meet the mastery-level scoring criteria and improve their writing performance in the resource room and generalize their writing abilities in the mainstream setting. However, the effectiveness of the learning strategies instruction has not been evaluated for elementary students with LD. Furthermore, the efficacy of the instruction was not evaluated in general education classes, and there is limited data on culturally diverse students with LD.

Process Approach to Writing Instruction

Another type of writing intervention that is less commonly employed with students with LD is a process approach to writing instruction (Clippard & Nicaise, 1998). A process approach to writing instruction focuses on giving students the opportunities they need to immerse themselves in the writing process at their own pace (Calkins, 1985). A process approach to writing instruction includes such features as: (1) there is a community of writers established in the classroom, (2) students are engaged in authentic writing tasks, (3) there are opportunities for social discourse and individual interactions between teachers and students, (4) students share their work with audiences of peers, and (5) there is a predictable structure that helps to guide students through the writing process (e.g., planning, drafting, revising, publishing)

(Atwell, 1985; Clippard & Nicaise, 1998; Goodman & Wilde, 1996; MacArthur et al., 1995). A process approach to writing instruction is based on the premise that if students are engaged in authentic writing tasks (i.e. they follow their own interests), the quality of their writing will improve (Bechtel, 1985). An example of a process writing approach is the Writer's Workshop (WW) (Atwell, 1987; Calkins, 1991; Graves, 1983). The literature indicates that students with LD typically lack general knowledge about the writing process (Englert et al., 1988; Graham, Schwartz, & MacArthur, 1993).

Although there is extensive literature to support the WW approach to writing instruction (e.g., Freedman, 1995; Stafford, 1993; Stretch, 1994), there have been only a few research-based studies to support its effectiveness with students with LD (Clippard & Nicaise, 1998; Danoff et al., 1993; MacArthur et al., 1995). In one such study (MacArthur et al., 1995), a curricular model that included WW, word processing, and strategic instruction within the SRSD model was taught to 113 elementary students with LD in 12 self-contained classrooms over a two-year period. The strategic instruction included two basic strategies: pre-writing planning and peer revising. The results of the study indicated that after the intervention, students in the experimental group made significant gains for quality from pretest to posttest on both narrative and informative essays while the control group made significant gains on only their narrative essays. The differences observed between the two groups on the quality of their narrative and informative essays was statistically significant (MacArthur et al., 1995), and the *d* effect sizes were .42 and .35, respectively. There was also a significant difference between the two groups in favor of the experimental groups on length for the narrative writing essays ($d = .33$). These effect sizes fall in the range of small to medium effect sizes (Green et al., 2000). However, there were no differences between the students in the experimental and control classes on measures related to spelling, capitalization, and punctuation errors. Furthermore, the

study demonstrated the *overall* effectiveness of an *integrated* instruction model for students with LD rather than a single process approach to writing instruction.

In a related study (Clippard & Nicaise, 1998), a WW methodology was the sole writing instruction for 18 fourth-and fifth-grade students with LD over a seven-month period. The results of the study indicated that the students in the WW and the non-Writer's Workshop (NWW) conditions both made significant improvements on the Test of Written Language-2 (Hammil & Larsen, 1988) from pretest to posttest, but there was no significant difference between the two groups (Clippard & Nicaise, 1998). The students with the WW condition did significantly outscore the NWW students on the adjusted average posttest scores on several variables: the number of words, the number of paragraphs, the number of sentences, T-units, mature vocabulary, number of revisions, and overall quality. The eta-squared effect sizes for the differences ranged from .26-.49, and these are considered to be very large (Green et al., 2000). However, there were no significant differences between the two conditions on these areas: number of sentences per paragraph, words per sentence, spelling, capitalization, and punctuation, and the number of words per T-units. One limitation of this study was that each of the experimental classes included both a special education and general education teacher, and this arrangement may not be typical of inclusive settings.

The efficacy of a sole or integrated process approach to writing instruction such as Writer's Workshop for students with LD remains uncertain. Although they appeared to benefit from this type of writing instruction, students with LD in both studies still struggled with the basic mechanics of writing after the completion of the interventions. However, the process approach to writing instruction did positively impact the quality of the students' writing. Additionally, the state writing standard requires that students write for a variety of purposes and audiences, and a process approach to writing seems to be appropriate to help meet this standard. Thus, there is

merit in investigating the potential combined effects of integrating this type of intervention with more explicit writing interventions into a comprehensive instructional model for students with LD.

As a whole, the existing research-based writing interventions have produced considerable gains for students with LD. However, there remain major gaps in the literature related to this area of research. Few of the studies focused on ensuring that the students with LD had access to the general education curriculum. Rather, the measures taken focused primarily on increasing the writing performance of students on variables that were narrow in scope (e.g., terminable units, length of essays). The impact of the interventions on the students' performance on authentic large-scale writing assessments was also not measured. Such measures are vital in today's educational climate in which student promotion is often based on their performance on a single indicator (e.g., statewide writing assessment). In addition, the four types of writing interventions targeted a limited range of writing behaviors and strategies such as pre-writing planning, and thus they did not represent a comprehensive writing program. There is a need to evaluate the potential cumulative or synergistic effects of integrating a set of interventions that individually have shown promise. In light of the rigorous standards set forth in statewide writing assessments, instructional writing programs should be configured in such a way that they enable students with LD to improve their performance on these assessments. Finally, few of the studies reviewed were conducted with large sample sizes and/or sample groups that consisted of students with LD and low-performing students from culturally and linguistically diverse backgrounds.

Low-Performing Students from Culturally and Linguistically Diverse Backgrounds

The amount of empirical research on culturally diverse students with disabilities over the past two decades is alarmingly low (Artiles, Trent, & Kuan,

1997). The lack of empirical research for this population is especially problematic because of the changes in student demographics in the United States and increasing numbers of culturally diverse students placed in special education programs. There has been a dramatic growth in specific ethnic groups such as Asian/Pacific Islanders (API) and Hispanic-Americans. Between 1980 and 1990, API groups increased by 108 percent (Sileo & Prater, 1998), and between 1990 to 1999 they grew by an additional 46 percent (U.S. Census Bureau, 2000). A similar trend of growth is also found in the Hispanic population, and especially in states such as California and Texas (Schevitz, 2000).

Parallel to these demographic trends, there has been a dramatic growth of students being identified with LD (37% increase from 1989 to 1999). Thirty-eight percent of these students are from culturally diverse backgrounds such as American-Indian, Asian/Pacific Islanders, African-American, and Hispanic (1.4%, 1.4%, 18.3%, and 15.8%, respectively) (USDE, 2001). Baca and Almanza (1991) estimated that close to one million English language learners (ELL) have been diagnosed with LD, and Hispanic children are statistically disproportionately represented in classes for students with LD (USDE, 2001). The overrepresentation of culturally diverse students receiving special education services has also been well documented for other ethnic groups. For example, African-American and American-Indian students are placed in special education classes for students with LD at alarming rates that are disproportionate to their representation in the general population (Artiles & Trent, 1994; Artiles & Zamora-Duran, 1997; USDE, 2001). These students are also underrepresented in classes for the gifted and talented (Gollnick & Chinn, 1990).

Considering the rates with which students from diverse backgrounds are placed in special education and identified with LD, there is only a small database of empirical articles specific to culturally diverse students in special education journals (Artiles et al., 1997). However, one area in the literature that has received

considerable attention for low-performing culturally and linguistically diverse students has been the focus on their differential cognitive styles.

Cognitive Styles

Several authors have suggested that the low academic achievement of students from culturally diverse backgrounds is partially due to the mismatch or incompatibility between their cognitive style and the dominant cognitive style in the school setting (Garcia, 1988; Moll, 1988). For example, Gersten, Brengelman, and Jiminez (1994) characterized special education instruction as *task analytic* and a *skill-building* approach, and this may not be consistent with the cognitive style of students from culturally diverse backgrounds (Voltz, 1998). The pioneers in this area of research defined cognitive style as *how* individuals think, perceive, learn, relate to others, solve problems, and an individual's cognitive functioning is related to the *process* of responding to tasks rather than the content of the activity (Witkin, Moore, Goodenough, & Cox, 1977). Although an individual's cognitive style appears to fall along a continuum, the cognitive styles at the two extremes are *field-independent* and *field-dependent*. The extent to which an individual perceives analytically reflects a tendency towards a field-independent cognitive style (Witkin et al., 1977). Thus, individuals who are less analytical and who tend to focus on broader concepts are considered to have a field-dependent cognitive style (Davis, 1996; Gollnick & Chinn, 1990; Franklin, 1992).

Field-independent cognitive style. Durodoye and Hildreth (1995) suggest that standardized tests used in American schools typically emphasizes the field-independent cognitive style. Additionally, Lu and Suen (1995) indicated in their study with undergraduate students that performance-based assessments tend to favor students who have field-independent cognitive styles over students who do not have this type of cognitive style. Davis (1996), Gollnick and Chinn (1990), Franklin (1992), Sileo and Prater (1998) found in their research that students with field-

independent cognitive styles have a tendency towards *verbal* and *analytical* emphasis in perception. For example, students with field-independent cognitive styles are more *linear* in their thought and learning processes. Therefore, these students can derive meaning about the parts *independent* of the context of the whole. Research also indicates that students with field-independent cognitive styles perform better on unstructured tasks (e.g., Annis, 1979; Pitts & Thompson, 1984; Spiro & Tirre, 1980; Witkin & Goodenough, 1981). In a national study of Japanese, Chinese, and Caucasian first and fifth graders, the authors concluded that by the time the students were in the fifth grade, they were most similar in performance on the level, variability, and structure for cognitive tasks (Stevenson, Stigler, Lee, Lucker, Kitamura, & Hsu, 1985). Thus, the cultural compatibility of Japanese- and Chinese-American students in regard to cognitive style may help to explain the success that many students from these cultural groups experience in American schools (Tharp, 1989).

Field-dependent cognitive style. Unfortunately, students from cultural groups who have a tendency towards field-dependent cognitive styles may not fare as well as their field-independent counterparts in American schools (Garcia, 1988; Moll, 1988). If school instruction and performance-based assessment depends more heavily on verbal and analytical skills, students who have incompatible cognitive styles are presumed to be more likely *not* to succeed on these tasks (Zelniker, 1989). Students with a field-dependent cognitive style have a *visual* emphasis in perception, and they seem to learn from observation and by doing rather than through verbal instructions (Cazden & John, 1971; Rogoff, 1986; Tharp, 1987). These students tend to also be more *holistic* in their thought processes and prefer to focus on broader concepts rather than details (Jordan & Tharp, 1979; Vogt et al., 1987). For example, students with field-dependent cognitive styles favor learning new concepts through whole-story discussions and overarching themes with the support of visual diagrams and

metaphors because they are *dependent* on the context of the whole in order to derive meaning from the parts (Jordan, Tharp, & Vogt, 1985). These students also tend to perform well on tasks that are related to social interactions (Witkins et al., 1977). The cognitive styles literature supports the notion that many students from culturally diverse backgrounds such as African American, Native American, Hispanic, and Pacific Islander appear to have a tendency towards field-dependent cognitive styles (e.g., Buriel, 1978, Boykin, 1992; More, 1985; Swisher & Deyhle, 1989).

Empirical research. Unfortunately, there are few studies in the literature related to effective instructional practices for students with different cognitive styles based on cultural differences (e.g., Robeck, 1982; Tharp & Gallimore, 1988). A major study that supports the cultural compatibility hypothesis is the Kamehameha Early Education Program (KEEP) (Tharp & Gallimore, 1988). In this 20-year program, children of Hawaiian ancestry in kindergarten through third grade are immersed in a language arts program that is compatible with their native culture. For example, since collaboration and cooperation are emphasized in the Hawaiian culture, students in the KEEP program frequently work in small peer groups. Research data indicated that Hawaiian children in the KEEP classrooms approached national norms on standardized achievement tests. In contrast, Hawaiian children who attended schools employing traditional instruction were among the lowest achieving minority students in the country (Gallimore, Tharp, Sloat, Klein & Troy, 1982; Klein, 1988; Tharp, 1982). The KEEP model has also been implemented and found effective for American-Indian students on a Navajo reservation (Tharp, 1989).

In a related study, the effects of differential cognitive styles on the attainment of emergent literacy concepts (e.g., phonemes) was evaluated for a culturally diverse sample of 46 first- through third-grade students (Robeck, 1982). The results of the study indicated that there was a significant correlation between cognitive style and the students' ability to recognize word boundaries at both grade levels. Students who

scored higher on the Children's Embedded Figures Test (Witkin, Oltman, Raskin, & Karp, 1971) and thus had a tendency towards a field-independent cognitive style, were better able to sort out single words from a line of print (Robeck, 1982). However, no data were reported on whether or not this correlation affected the students' performance on actual reading measures.

In another study, Elliot (1976) investigated the effects of matching math instruction with students' cognitive styles for 80 third-grade students. For example, the math instruction for the students with field-independent cognitive styles included a structured example sequencing while the instruction for the students with field-dependent cognitive styles included a random example sequencing. The results of the study indicated that both field-independent and field-dependent students who received their specific matched instruction performed significantly higher on math tasks than their peers who received the control treatment (Elliot, 1976). Another important finding was that there was no significant difference on posttest scores between the students with field-independent and field-dependent cognitive styles. Thus, the matched instruction appeared to negate the advantage that the field-independent students generally have on academic tasks (Robeck, 1982). However, these positive effects were not maintained over time.

Although the empirical research on cognitive-style instruction for culturally diverse students is relatively small, designing instruction to match students' cognitive style appears to be a promising intervention for low-performing culturally diverse students. Students from culturally diverse groups who received instruction that was compatible with their cognitive style seemed to benefit from the matched instruction and were able to increase their performance on academic tasks in language arts and mathematics. There also appears to be a positive correlation between cognitive style and the recognition of word boundaries. However, the lack of a recent and more comprehensive database of empirical studies for low-performing culturally diverse

students has serious implications for researchers and educators. Without empirically-based studies, educators will continue to use instructional methods that are based on ideas and cultural myths rather than research-based interventions (Artiles et al., 1997).

In summary, there remain significant gaps in the literature relative to effective writing interventions for students with LD and low-performing students from culturally diverse backgrounds. With regard to students with LD, the available writing interventions have favorably impacted their writing performance on writing strategies, quality, length, planning time, and inclusion of text structure elements. However, few studies have been conducted to specifically to help students with LD meet state standards and prepare them for large-scale assessments (e.g., statewide writing assessments). The interventions also do not address the students' writing needs on a more comprehensive level. With regard to low-performing students from culturally and linguistically diverse backgrounds, few compatible cognitive-styles interventions have produced favorable gains for these students on academic tasks in language arts and mathematics. However, these interventions did not address the students' writing needs in inclusive general education settings or their low-performance on large-scale writing assessments (e.g., statewide writing assessment). Given the success of each of the writing interventions and compatible cognitive-styles interventions when singularly applied, there is merit in investigating the integration of these methods to form a comprehensive instructional model to increase the *overall* writing performance of students with LD and low-performing students from culturally-diverse backgrounds in inclusive general education settings on large-scale writing assessments.

CHAPTER THREE

Methods

Subjects

A total of 113 fifth-grade students from two schools participated in the study. A significant proportion of the subjects was ethnically and linguistically diverse. Forty-three percent of the participants were African-American, 38 percent Caucasian, 14 percent Hispanic, three percent American-Indian, and one percent Asian-American. Additionally, 79 percent of the participants came from low-income families, and 69 percent lived in single-parent or joint-custody households. The participants were all enrolled in five intact general education classes in which students with learning disabilities (LD), other health impairments (OHI), and emotional disabilities (ED) were fully included. The five classes were selected on the following criteria: (a) at least 10 percent of the students were identified with a disability, (b) the students with disabilities had Individual Education Plans (IEPs), and (c) the classification of students with disabilities met federal and state requirements. Based on these criteria, a total of 19 students with disabilities (including 14 students with LD) participated in the study.

Personnel in both participating schools (referred to as School X and Y) had already balanced the fifth-grade classes for gender and ethnicity. The classes were assigned to the experimental and comparison conditions in such a way as to ensure the following: the minimization of treatment contamination across the conditions and a comparable number of students with disabilities in each condition (see Figure 1 for classroom configurations and assignment to conditions). Both schools were designed in such a way that classrooms were arranged in pairs, and a thin folding wall (that was mobile) separated each pair of classrooms. Two classes from School X (that shared a folding wall) and one class from School Y were selected for the experimental condition. The three classes in the experimental condition were

randomly selected to receive one of the two treatment interventions (referred to as Groups A and B). Two classes from a different pair of classrooms at School Y (that shared a folding wall) were selected for the comparison condition (referred to as Group C). There were 23, 44, and 46 students in Groups A, B, and C, respectively.

Statistical tests (non-parametric and parametric) were conducted to evaluate whether Groups A, B, and C were comparable at the time of the pretest. (See Table 1 for student numbers and demographic data by groups.) A two-way contingency table analysis indicated that there were no significant differences between the three groups with regard to their gender [Pearson $\chi 2$ (2, N=113) = .746, $\underline{p}$. =.689, Cramer's V=.08], ethnicity [Pearson $\chi 2$ (8, N=113) = 9.7, $\underline{p}$. =.286, Cramer's V=.293], lunch status [Pearson $\chi 2$ (4, N=113) = 8.68, $\underline{p}$. =.07, Cramer's V=.277], and residential status [Pearson $\chi 2$ (8, N=113) = 8.69, $\underline{p}$. =.369, Cramer's V=.277]. A one-way multivariate analysis of variance (MANOVA) indicated that there were no significant differences between the three groups of students with regard to their age and average language arts scores on the previous year's Metropolitan Achievement Test, Wilks' $\wedge$= .965, $\underline{F}$ (4, 196) = .873, $\underline{p}$. = .481, $\eta 2$ = .018. (See Table 2 for student test data by groups.)

The IEPs of the 14 students with LD were reviewed to ensure that written language was specified as a disability, and statistical tests (non-parametric and parametric) were conducted to evaluate whether the subgroups of students with LD were comparable at the time of the pretest across the three groups. There were five, four, and five students with LD in Groups A, B, and C, respectively. (See Table 3 for demographic data of students with LD by groups.) A two-way contingency table analysis indicated that there were no significant differences between the three subgroups of students with LD with regard to their gender [Pearson $\chi 2$ (2, N=14) = 3.31, $\underline{p}$. =.191, Cramer's V=.486], ethnicity [Pearson $\chi 2$ (6, N=14) = 5.08, $\underline{p}$. =.534, Cramer's V=.426], lunch status [Pearson $\chi 2$ (2, N=14) = 2.69, $\underline{p}$. =.26, Cramer's V=.439], and residential status [Pearson $\chi 2$ (8, N=14) = 6.65, $\underline{p}$. =.575, Cramer's

V=.487]. A one-way MANOVA indicated that there were no significant differences between the three subgroups of students with LD with regard to their age, IQ scores, and achievement scores, Wilks' $\wedge$= .216, F (8, 14) = 2.02, p. = .120, $\eta 2$ = .535. (See Table 4 for test data of students with LD by groups.)

The Children's Embedded Figures Test (Witkin, Oltman, Raskin, & Karp, 1971) was administered to the students in the three groups in order to measure and group them according to their cognitive styles. The students were then placed into subgroups as having either a high field-dependent or high field-independent cognitive style. There were 10, 15, and 25 students with field-dependent cognitive styles in Groups A, B, and C, respectively. (See Table 5 for numbers of students representing the cognitive styles in each group.) Statistical tests (non-parametric and parametric) were conducted to evaluate whether the subgroups of students with field-dependent cognitive styles (FDCS) were comparable at the time of the pretest across the three groups. (See Table 6 for the demographic data of students with FDCS.) A two-way contingency table analysis indicated that there were no significant differences between the three subgroups of students with FDCS with regard to their gender [Pearson $\chi 2$ (2, N=50) = 3.55, p. =.169, Cramer's V=.267], ethnicity [Pearson $\chi 2$ (6, N=50) = 7.75, p. =.257, Cramer's V=.278], lunch status [Pearson $\chi 2$ (4, N=50) = 5.5, p. =.239, Cramer's V=.235], and residential status [Pearson $\chi 2$ (8, N=50) = 10.08, p. =.259, Cramer's V=.318]. A one-way MANOVA indicated that there were no significant differences between the three groups of students with regard to their age and average Language Arts scores on the previous year's Metropolitan Achievement Test, Wilks' $\wedge$= .929, F (4, 82) = .770, p. = .548, $\eta 2$ = .036. (See Table 7 for the test data of students of FDCS by groups.)

Setting

The students attended two public elementary schools in an urban school district in a Midwestern state. This district was targeted because of its high proportion

of minority and low-income students. At School X, the minority student population constituted 60 percent of the total student population with 30 percent African-American, 26 percent Hispanic, and three percent American-Indian. Approximately 81 percent of the students at School X received free lunches, and 6 percent received reduced-price lunches. At School Y, the minority student population constituted 58 percent of the total student population with 48 percent African-American, 10 percent Hispanic, and two percent American-Indian. Approximately 66 percent of the students at School Y received free lunches, and 7 percent received reduced-price lunches. In the previous academic year, the fourth-grade students at both schools scored below the district and national average on the Metropolitan Achievement Test and below the state average on the statewide writing assessment.

The classrooms at both schools had typical furniture and equipment, and they were similar in appearance. Each class had trapezoid-shaped desks that were pushed together to form an octagonal table (six students at each table). The classrooms were also equipped with three large white boards and an overhead projector that were used during the instruction in the experimental classes. Additionally, a bulletin board was used to display some of the information presented during the instruction. The students in the experimental classes were given two writing folders (one for classwork and one for homework) which they kept either in their cubbies or on their desks.

Demand Writing Instruction Model

The conceptual framework on which the writing intervention was based is illustrated in Figure 2; it was founded on six underlying premises shown at the bottom of Figure 2: (a) standards-based reform calls for high standards for *all* students (Feldman, 2001); (b) the participation of students with disabilities in state assessments is a major goal of special education policy makers and required under the 1997 reauthorization of IDEA (Goertz et al., 1999); (c) the writing process requires knowledge of text structure (Hillocks, 1987); (d) skilled writers plan before writing

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(Flowers & Hayes, 1980); (e) writing instruction that enables students with learning disabilities to be skillful and successful must be intensive and explicit (Deshler, Schumaker, Lenz, Bulgren, Hock, Knight, & Ehren, in press); and (f) instruction that is compatible with the students' cultural cognitive style should lead to an increase in their academic performance (Tharp, 1989).

These underlying premises were significant to the development of the Demand Writing Instruction Model (DWIM) because they helped to guide the framing of the objectives, concepts, sequence, and structure of the modules and lessons. The DWIM was developed by integrating previously validated instruction in writing strategies (e.g., Kline, Schumaker, & Deshler, 1991; Schmidt, Schumaker, Alley & Deshler, 1989) with instruction on content knowledge (e.g., story-grammar instruction). Thus, as depicted on the left side of Figure 2, the DWIM intervention consisted of two major components: content-knowledge instruction and writing-strategies instruction.

The Content- Knowledge Component

The content-knowledge component, shown on the left side of Figure 2, consisted of four modules of instruction: the Six Traits of Writing, narrative text structure, writing assessment prompts, and pre writing planning. There were a total of 11 lessons in this component. Within the first module, students were taught three lessons related to the Six Traits of Writing (idea, voice, conventions, organization, word choice, and sentence fluency) and the Six Traits of Writing scoring rubric that had been adopted by the district. (See Appendix A for a sample lesson.) Key elements from the Six Traits of Writing were continually integrated throughout the other instructional modules and lessons. For example, during lessons for the Sentence Writing Strategy (Schumaker & Sheldon, 1998), the students in the experimental groups were also encouraged to improve their word choice.

In the second module (two lessons), students were instructed on narrative text structure using story-grammar instruction. The students were taught how to identify five basic story parts (setting, character, main event, resolution, and emotion) from popular picture books. Within the third module (two lessons), students were taught how to critically analyze writing-assessment prompts that were typically used on statewide writing assessments. Using the mnemonic device, *PAT,* the students were taught how to "dissect" the prompt in order to identify the *purpose, audience*, and *topic*. This module also included methods on how to brainstorm ideas appropriate for the topic. In the fourth module (four lessons), the students were taught how to plan an introductory paragraph, a main event paragraph, a conclusion/resolution paragraph, and an emotion/reaction paragraph in response to a writing-assessment prompt.

The Writing-Strategies Component

The second component of the DWIM, shown in the center of Figure 2, consisted of four writing-strategies modules (a total of 19 lessons). The writing-strategies modules included previously validated instruction in writing strategies and key elements of certain writing strategies that were modified for the elementary level. The students were initially taught how to write simple sentences using selected lessons from the *Fundamentals in the Sentence Writing Strategy* program (Schumaker & Sheldon, 1998). Next, they were taught how to write a topic sentence, detail sentences, and a lead-in sentence by instructing them to use a simplified version of the Paragraph Writing Strategy (Schumaker & Lyerla, 1991). The students were then taught how to self-correct their capitalization, overall appearance, punctuation, and spelling errors using a simplified version of the Error Monitoring Strategy (Schumaker et al., 1985). Finally, they were taught how to write a four-paragraph essay on one central topic/idea and how to create transitions between paragraphs by instructing them to use key elements of the Theme Writing Strategy (Schumaker, 2002).

Expected Outcomes

As shown on the right side of Figure 2, several outcomes are expected to be realized by students who participate in the DWIM. First, they are expected to earn higher overall scores on the statewide writing assessment exam. Next, they are expected to earn higher scores related to the overall quality of their writing (as perceived by teachers) and overall mastery of writing strategies. The participants are also expected to show improved performance related to the following variables: time spent on pre-writing planning, inclusion of text-structure elements, and length of essays. Finally, they are expected to increase their levels hope, writing self-efficacy, and strategic knowledge for meeting the demands of writing assessments.

Differential Instruction for Cognitive Styles

Within specific modules of the content-knowledge component, the subjects in Groups A and B received differential instruction. (See Table 8 for the elements of the differential instruction.) The groups had been randomly assigned to receive instruction that was compatible with a field-dependent or field-independent cognitive style.

Instruction for Field-Dependent Cognitive Style

During the narrative text structure and pre-writing planning modules, students in Group A received visual/holistic instruction that was considered to be compatible with a field-dependent cognitive style (Sawyer, 1991). Instruction during these modules included use of pictorial representations of story-grammar components, simplified language, a mnemonic phrase, and visual representations for paragraph and theme pre-writing plans. For example, the picture in Figure 3 was used to depict the basic story-grammar elements.

Instruction for Field-Independent Cognitive Style

During the same modules, students in Group B received analytic/linear instruction that was considered to be compatible with a field-independent cognitive

style (Witkin et al., 1977). Instruction during the narrative text structure and pre-writing planning modules included the same content as for the field-dependent instruction. However, the students in Group B were taught using linear outlines with no pictorial representations for the story-grammar components, paragraph pre-writing plan, and theme pre-writing plan. Figure 4 illustrates the outline used for basic story-grammar elements.

Measures

Measures Associated with Writing Strategies

Sentence writing scores. Sentence writing scores were determined by using a scoring system associated with the Sentence Writing Strategy (Schumaker &Sheldon, 1998) which included a score sheet and scoring guidelines. The type of sentence that was written by each student for each sentence attempt was recorded on the score sheet. Two proportion scores were derived from use of this instrument for each written product: (a) the proportion of complete sentences (the number of complete sentences divided by the number of sentences attempted), and (b) the proportion of complicated sentences (the number of compound, complex, and compound/complex sentences divided by the number of sentences attempted).

Paragraph writing score. Paragraph writing scores were determined by using a scoring system associated with the Paragraph Writing Strategy (Schumaker & Lyerla, 1991) which included a score sheet and scoring guidelines. The types of sentences and transition words that were written for the first paragraph as well as the point of view, tense, title and format on the essay were recorded on the score sheet. One percentage score was derived from use of this instrument for each written product. The *paragraph writing score* was calculated by adding up the total number of points accumulated for the three sentence types (topic, detail, and clincher), transition words, a standard point of view, a standard tense, a title, and a standard paragraph format and then by dividing the sum by the number of points possible (44).

Theme writing score. The theme writing score was determined by using a scoring system similar to the one associated with the Theme Writing Strategy (Schumaker, 2002) which included a score sheet and scoring guidelines. (See Appendix B for scoring procedures and measurement instruments.) The types of sentences and transition words that were written in each of the four paragraphs were recorded on the score sheet. One percentage score was derived from use of this instrument for each written product. The *theme writing score* was calculated by adding up the total points accumulated for the different sentence types (topic, detail, lead-in, transition/topic, and concluding) and transition words in each of the four paragraphs and then dividing the sum by the number of points possible (114).

Total non-spelling errors per word score. The number of non-spelling errors per word was determined by using a scoring system associated with the Error Monitoring Strategy (Schumaker et al., 1985) which included a score sheet and scoring guidelines. The types of non-spelling errors (capitalization, punctuation, overall appearance) found in the essays were recorded on the score sheet. One ratio score was derived from use of this instrument for each written product. The *total non-spelling errors per word score* was calculated by adding up the numbers of errors related to capitalization, overall appearance, and punctuation and then dividing the sum by the total number of words in the written product.

Holistic Writing Measures

Writing-quality score. The overall quality of writing achieved by each student was assessed by the teachers of the students who participated in the study and the curriculum specialist at each school (a total of 7 teachers). All of the writing samples collected during the pretest and posttest were separated into groups based on the percentage of complete sentences in each written product. The writing samples were placed in three groups ranging from poor (scores = 1% to 35%), to medium (scores = 36% to 75%), and good (scores = 76% to 100%). A sample of ten essays (two from

each class) associated with each level was selected for review, and the teachers were asked to choose the two "best" essays at each level. The essay(s) that were chosen by more than one teacher were then selected as "anchor" papers. The anchor papers at the poor, medium, and good levels represented scores of two, four, and six, respectively, on a seven-point quality scale. (See Appendix C for sample anchor pieces.)

Next, the writing samples were word-processed and any identifiable information was removed to assure the students' anonymity. Then the pretest and posttest essays were equally divided, mixed up, and distributed to the five teachers and two curriculum specialists. Each person received 16 pretests and 16 posttests in mixed-up order. They were instructed to score each of the essays on a one- to seven-point quality scale (with seven as the highest score) using the anchor papers to guide their scoring. They were also instructed to score essays that were completely irrelevant to the topic that had been specified in the assessment prompt as an automatic zero. In addition, seven randomly selected essays were rated by all of the scorers to determine the level of agreement between the five teachers and two curriculum specialists. A Kendall Coefficient of Concordance was conducted on the scorers' ratings, and the results of the test indicated that the scorers were significantly consistent with each other (W=.969).

Statewide writing assessment score. The state writing assessment was administered to all of the subjects by their classroom teachers who followed the state guidelines for the exam. Evaluators who were trained and certified by the State Department of Education scored the students' statewide writing assessment essays. Four evaluators (who were blind to the conditions of the study) scored the essays for each of the Six Traits using a five-point scoring rubric (see Appendix B) from the Six Traits of Writing curriculum (Northwest Regional Educational Laboratory, 2001) that was adopted by the state. Each of the essays was scored by two independent

evaluators, and the essay was scored by a third evaluator when there was more than a one-point discrepancy between the first two scores. A mean trait score was calculated for each of the six traits for each student product by taking the average score across the independent evaluators. An *overall statewide writing score* was calculated for each student by calculating the average score across the six mean trait scores. A higher overall statewide writing score indicated a greater level of writing proficiency.

Other Writing Measures

Text-structure score. To measure the inclusion of text structure elements, a checklist was developed and used to evaluate the pretest and posttest essays for components related to the five parts of story grammar. The 15-item checklist included yes/no questions such as whether or not the student included the setting of the event in the essay (see Appendix B). For example, if the student mentioned the setting of the event and the setting was included in the first paragraph of the essay, he/she would receive two points. A *text structure percentage score* was calculated by dividing the number of total points accumulated by the total number of possible points (15).

Pre-writing planning-time score. To measure pre-writing planning time, the total time in minutes that students spent developing their pre-writing plans on the pretest and posttest essays was determined. An observer noted the time that the students were allowed to begin the assessment and recorded the time that each student actually started to write his/her essay. The time when the student started writing the essay was then subtracted from the actual start time to determine the *planning time score*.

Essay length score. To measure the length of the essays, the essays were typed into a word-processing program. Then each word on each essay was counted using the computer word-processing program (i.e., Microsoft Word). The total number of words served as the *essay length score*.

Knowledge of writing process score. To measure the students' knowledge about the writing process and how to strategically approach a timed writing assessment, they were interviewed. They were asked three questions related to taking a writing assessment exam. The students were asked individually to answer three questions: What do you do *before* you start writing?; What do you do *while* you are writing?; and What do you do *after* you are finished writing a first draft? The students' responses were then noted verbatim. To score the responses, a list of acceptable responses for each question was developed (see Appendix B), and the students' responses were scored against this list. For example, students received one point if they said during the interview that they brainstormed ideas before writing. *A strategy knowledge score* was calculated by summing the number of points accumulated (total possible points = 23). Approximately 10 percent of the interviews were tape recorded for reliability purposes to ensure that the students' responses were written accurately.

Writing-Affect Measures

Hope score. To measure the students' hope, the Hope Scale (Snyder, 1995) was administered to all subjects. On the scale, students had to respond to each of ten statements (read aloud) using a six-point Likert-type scale to indicate their level of hope (see Appendix B). Using instructions provided by the author of the scale, a *hope score* was calculated by summing the number of points accumulated (there were total possible 60 points). A higher *hope score* indicated a greater level of student hope.

Writing self-efficacy score. To measure writing self-efficacy, the Writing Self-Efficacy Scale (Graham & Harris, 1989) was modified for personal narrative writing and administered to all subjects (see Appendix B). On the scale, students had to respond to each of eight statements (read aloud) using a five-point Likert-type scale to indicate their level of writing self-efficacy for personal narrative essays. Using instructions provided by the authors of the scale, a *writing self-efficacy score* was

calculated by summing the ratings for all the items on the scale. A higher *writing self-efficacy score* indicated a greater level of writing self-efficacy for personal narrative essays.

Social-Validity Measures

Student satisfaction scores. To measure student satisfaction, a Student Satisfaction Survey was administered to all of the students in the experimental and comparison groups. The survey included ten statements related to writing personal narrative essays and taking writing tests in school (see Appendix B). The students responded to each item using a seven-point Likert-type scale. A *mean student satisfaction score* was calculated for each item by averaging the students' ratings. A higher mean score indicated a higher level of student satisfaction.

Teacher satisfaction scores. To measure teacher satisfaction, a Teacher Satisfaction Survey was administered to the three teachers who observed their students participate in the experimental instruction. The survey included ten statements related to the DWIM and teaching writing (see Appendix B). The teachers responded to each item using a seven-point Likert-type scale. A *mean teacher satisfaction score* was calculated for each item by averaging the three teachers' ratings. A higher mean score indicated a higher level of teacher satisfaction.

Caregiver satisfaction score. To measure caregiver satisfaction, a CaregiverSatisfaction Survey and a sample of each student's work were sent to the students' caregivers for the students in the three experimental classes. The survey included ten statements related to the DWIM and their child's writing performance (see Appendix B). The caregivers responded to each item using a seven-point Likert-type scale. A *mean caregiver satisfaction score* was calculated for each item by averaging the caregivers' ratings. A higher mean score indicated a higher level of caregiver satisfaction.

Reliability of Scoring

Two independent observers scored 10 percent of the pretests and posttests for reliability purposes. Their records were compared item by item. An agreement was tallied if both observers scored the student's response exactly the same. A disagreement was tallied if the two observers scored the student's response differently. The total number of agreements was divided by the total number of agreements plus disagreements and then multiplied by 100 to determine the percentage of agreement. The writing samples were initially scored by the researcher who had been extensively trained in the writing strategies scoring procedures. Then, point-by-point reliability was conducted independently on 10 percent of all of the writing samples by one of the authors of the writing strategies. The writing-knowledge/behavior and writing-affect measures were initially scored by a research assistant who followed the authors' scoring procedures for each measure. Then, point-by-point reliability was conducted independently on 10 percent of these measures by the researcher.

Sentence writing scores. The percentage of agreement for the pretest was 88 percent, and the percentage of agreement on the posttest was 97 percent.

Paragraph writing score. The percentage of agreement for the pretest was 91 percent, and the percentage of agreement on the posttest was 90 percent.

Theme writing score. The percentage of agreement for the pretest was 88 percent, and the percentage of agreement on the posttest was 85 percent.

Text structure score. The percentage of agreement for the pretest was 92 percent, and the percentage of agreement on the posttest was 96 percent.

Strategy knowledge score. The percentage of agreement for the pretest was 94 percent, and the percentage of agreement on the posttest was 92 percent.

Hope score. The percentage of agreement for the pretest was 100 percent, and the percentage of agreement on the posttest was 100 percent.

Writing self-efficacy score. The percentage of agreement for the pretest was 99 percent, and the percentage of agreement on the posttest was 100 percent.

Student satisfaction score. The percentage of agreement for the survey (posttest only) was 100 percent.

Procedures

During the pretest data collection phase, pretest-writing samples were collected, and specific writing-affect measures were administered to all of the students in the three groups. During the intervention phase, students in Groups A and B received the DWIM intervention from the researcher while the students in Group C received traditional instruction from their classroom teachers. The five classes across both experimental and comparison conditions were given the same amount of time for instruction and practice between the pretest and posttest data collection phases. At the end of the intervention phase, a posttest-writing sample was collected from the students in the three groups. One week after the completion of the intervention, all of the students participated in the statewide writing assessment exam. Two weeks following the completion of the intervention, the writing-affect measures and the student satisfaction survey were administered to all of the students in the three groups. Additionally, the teachers and the parents of students in the experimental groups also completed satisfaction surveys related to the DWIM intervention.

Experimental Condition

The three experimental classes received instruction in the content-knowledge component and writing-strategies component in the DWIM. Subjects in the experimental groups received differential instruction during the narrative text structure and pre-writing planning modules. Both groups received daily instruction in their intact classes from the researcher (except during fieldtrips, inservice and snow days) over a three-month period. The total writing intervention consisted of 30 lessons and the instructional time required was 30-45 minutes per lesson. (See

Appendix D for sequence of instruction.) A typical lesson consisted of an advance organizer, student feedback, a demonstration, modeling, a guided-practice activity, an independent-practice activity, and a homework assignment (see Appendix A). To ensure instructional integrity across the two treatment interventions, scripted lesson plans were used to guide the teaching process, and each step of the lesson plan was checked off as it was completed. The classroom teachers remained in the classroom during instruction and observed the lesson.

Comparison Condition

The students in the two classes in the comparison condition, Group C, were not exposed to the DWIM intervention. These students were instructed by their regular classroom teachers who used the traditional 5th-grade writing curriculum that had been adopted by the district. The two teachers of the comparison students had previously received inservice training and materials from the district on the Six Traits of Writing.

Experimental Design

The study utilized a comparison-group design (Campbell & Stanley, 1963), and the impact of the DWIM was measured for five categories of dependent variables related to writing (see Table 9 for a list of dependent variables). First, a one-way multivariate analysis of variance (MANOVA) with appropriate follow-up tests was conducted to evaluate whether the students in the three groups and subgroups were comparable with regard to the writing variables at pretest. Next, parametric statistical tests were utilized to compare the posttest data collected from the students in the three groups and the six subgroups. A one-way analysis of covariance (ANCOVA) with the pretest scores serving as the covariate was conducted for each of the dependent variables. If the ANCOVA yielded significant differences among the groups, follow-up tests were conducted to evaluate pairwise differences among the adjusted posttest

means. The Holm's sequential Bonferroni procedure was used to control for Type I error across the three pairwise comparisons.

If a preliminary analysis indicated that the homogeneity-of-slopes assumption was not met to proceed with an ANCOVA (see Appendix E, Table E1 for results of homogeneity-of-slopes tests), a one-way MANOVA or a one-way ANOVA was conducted. If the MANOVA or ANOVA yielded significant differences among the groups, follow-up tests were conducted to evaluate pairwise differences among the posttest means. The Tukey procedure was used to control for Type I error across the three pairwise comparisons. For variables where only posttest scores were collected (e.g., the statewide writing assessment), a MANOVA or ANOVA was conducted with appropriate follow-up tests.

The following null hypotheses were tested:

1. There are no significant differences between the two experimental groups who received the DWIM intervention and the comparison group who received the traditional writing instruction on their overall scores on the statewide writing assessment and the individual Six Traits of Writing scores.
2. There are no significant differences between the students with learning disabilities (LD) from the two experimental groups who received the DWIM intervention and the students with LD from the comparison group who received the traditional writing instruction on their overall scores on the statewide writing assessment and the individual Six Traits of Writing scores.
3. There are no significant differences between the students with field-dependent cognitive styles (FDCS) from the two experimental groups who received the DWIM intervention and the students with FDCS from the comparison group who received the traditional writing instruction on their overall scores on the statewide writing assessment and the individual Six Traits of Writing scores.

4. There are no significant differences between the posttest scores of the two experimental groups who received the DWIM intervention and the comparison group who received the traditional writing instruction on each of the following outcome measures: (a) sentence writing, (b) paragraph writing, (c) theme writing, (d) non-spelling errors per word, (e) overall writing quality, (f) inclusion of text-structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) student satisfaction.
5. There are no significant differences between the posttest scores of the students with LD from the two experimental groups who received the DWIM intervention and the students with LD from the comparison group who received the traditional writing instruction on each of the following outcome measures: (a) sentence writing, (b) paragraph writing, (c) theme writing, (d) non-spelling errors per word, (e) overall writing quality, (f) inclusion of text-structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) student satisfaction.
6. There are no significant differences between the posttest scores of the students with FDCS from the two experimental groups who received the DWIM intervention and the students with FDCS from the comparison group who received the traditional writing instruction on each of the following outcome measures: (a) sentence writing, (b) paragraph writing, (c) theme writing, (d) non-spelling errors per word, (e) overall writing quality, (f) inclusion of text-structure elements, (g) time spent on pre-writing planning, (h) essay length, (i) hope, (j) writing self-efficacy, and (k) student satisfaction.

CHAPTER FOUR

Results

The results reported below focus on the dependent variables for which a parametric test revealed significant differences between the three groups and/or sets of three subgroups of students on the posttest. The statistics for the dependent variables for which no significant differences were found are reported in Appendix F, Table F1. Before parametric tests were conducted on the posttest scores, a one-way MANOVA or one-way ANOVA was conducted to evaluate whether the three groups or subgroups were comparable on the dependent variables at the time of the pretest. The results of the MANOVAs (see Table 10) revealed no significant differences between the three groups' pretest scores except with regard to the *proportion of complicated sentences*. The follow up ANOVA, F (2, 110)= 6.39, p. = .002, $\eta 2$ = .104 indicated that there was a significant difference on the students' pretest scores for *proportion of complicated sentences* between experimental Group B and comparison Group C (in favor of Group C). There were no significant differences between the pretest scores of the LD and FDCS subgroups on any of the dependent variables.

Measures

Measures Associated with Writing Strategies

Sentence writing scores. The mean pretest and posttest sentence-writing scores across the three groups are reported in the first two rows of Table 11. The ANCOVA conducted for the *proportion of complicated sentences* revealed significant differences between the adjusted mean posttest scores of the three groups, F (2, 110) = 15.5, MSE = .033, p.< .001, $\eta 2$ = .222. Group B had the largest adjusted mean posttest score (M =.37), Group A had a slightly smaller adjusted mean posttest score (M =.35), and Group C had the smallest adjusted mean posttest score(M =.20). The follow-up tests revealed significant differences between the adjusted mean posttest

scores of Groups A and B and between the posttest scores of Groups A and C, but no significant difference between the posttest scores of Groups A and B.

The mean pretest and posttest sentence-writing scores across the three subgroups of students with LD are reported in the first two rows of Table 12. The ANCOVA indicated that there were significant differences between the adjusted mean posttest *proportion of complete sentences* scores for the three subgroups, F (2, 11) = 11.6, MSE = .044, p. = .002, η2 = .699. Group B had the largest mean (M =.75), Group A had a smaller mean (M =.58), and Group C had the smallest mean (M =.24). There were significant differences in the posttest scores between Groups A and C and between Groups B and C, but none between the posttest scores of Groups A and B.

The mean pretest and posttest sentence-writing scores across the three subgroups of students with FDCS are reported in the first two rows of Table 13. The ANCOVA conducted for the posttest *proportion of complicated sentences* scores revealed similar results as the comparison across the three subgroups of students with LD. There were significant differences between the adjusted mean posttest scores of the three subgroups, F (2, 47) = 6.49, MSE = .032, p.= .003, η2 = .220. Group B had the largest mean (M =.33), Group A had a smaller mean (M =.28), and Group C had the smallest mean (M =.16). The follow-up tests revealed significant differences in the posttest scores between Groups A and C and between Groups B and C, but no significant difference between the posttest scores of Groups A and B.

Paragraph writing score. The mean pretest and posttest paragraph-writing scores across the three groups are reported in the third row of Table 11. The ANCOVA conducted for the posttest *paragraph writing scores* revealed that there were significant differences between the adjusted mean posttest scores of the three groups, F (2, 110) = 22.43, MSE = .017, p.< .001, η2 = .292. Group A had the largest mean (M = .45), Group B had a slightly smaller mean (M =.44), and Group C had the

smallest mean (M =.29). The differences in the posttest scores of Groups A and B and of Groups B and C were significant, but there was no significant difference between posttest scores of Groups A and B.

The mean pretest and posttest paragraph-writing scores across the three subgroups of students with FDCS are reported in the third row of Table 13. The ANCOVA conducted for the posttest *paragraph writing score* indicated that there were significant differences between the adjusted mean posttest scores of the three subgroups, F (2, 47) = 11.9, MSE = .018, p. < .001, η2 = .340. Once again, Group A had the largest mean (M =.42), Group B had a slightly smaller mean (M =.41), and Group C had the smallest mean (M =.24). The follow-up tests revealed significant differences between the posttest scores of Groups A and B and between Groups B and C, but no significant difference between the posttest scores of Groups A and B.

Theme writing score. The mean pretest and posttest theme-writing scores across the three groups are reported in the fourth row of Table 11. The ANCOVA conducted for the posttest *theme writing score* revealed significant differences between the adjusted mean posttest scores of the three groups, F (2, 110) = 33.66, MSE = .02, p.< .001, η2 = .382. Group B had the largest mean (M =.33), Group A had a slightly smaller mean (M =.32), and Group C had the smallest mean (M =.14). There were significant differences in the posttest scores between Groups A and B and between Groups B and C, but none between posttest scores of Groups A and B.

The mean pretest and posttest theme-writing scores across the three subgroups of students with LD are reported in the fourth row of Table 12. The results of the ANCOVA conducted for the posttest *theme writing score* revealed that there were significant differences between the adjusted mean posttest scores of the three subgroups, F (2, 11) = 6.12, MSE = .02, p. = .018, η2 = .550. Group B had the largest mean (M =.30), Group A had a smaller mean (M =.18), and Group C had the smallest mean (M =.02). The posttest scores of Groups B and C were significantly different,

but the scores of Groups A and C and Groups A and B were not significantly different.

The mean pretest and posttest theme-writing scores across the three subgroups of students with FDCS are reported in the fourth row of Table 13. The ANCOVA conducted for the posttest *theme writing score* indicated that there were significant differences between the adjusted mean posttest scores of the three subgroups, F (2, 47) = 13.6, MSE = .02, p.< .001, η2 = .371. Once again, Group B had the largest mean (M =.28), Group A had a slightly smaller mean (M =.27), and Group C had the smallest mean (M =.10). There were significant differences between the posttest scores of Groups A and B and of Groups B and C, but no significant difference between the posttest scores of Groups A and B.

Total non-spelling errors per word score. The mean pretest and posttest total non-spelling errors per word scores across the three groups are reported in the fifth row of Table 11. The ANOVA conducted for the posttest *total non-spelling errors per word score* revealed significant differences between the mean posttest scores of the three groups, F (2, 110) = 7.911, p. = .001, η2 = .126. Group B had the smallest mean (M = .085), Group A had a slightly larger mean (M =.10), and Group C had the largest mean (M =.14). The posttest scores of Groups B and C were significantly different, but there were no significant differences between the posttest scores of Groups A and C and of Groups A and B.

The mean pretest and posttest total non-spelling errors per word scores across the three subgroups of students with LD are reported in the fifth row of Table 12. Once again, the ANOVA conducted for the posttest *total non-spelling errors per word score* revealed significant differences between the mean posttest scores of the three subgroups, F (2, 11) = 9.55, p. = .004, η2 = .635. However, this time, Group A had the smallest mean (M = .132), Group B had a slightly larger mean (M =.135), and Group C had the largest adjusted mean (M =.27). The follow-up tests revealed

significant differences between the posttest scores of Groups A and C and between the posttest scores of Groups B and Group C, but there was no significant difference between the posttest scores of Groups A and B.

The mean pretest and posttest total non-spelling errors per word scores across the three subgroups of students with FDCS are reported in the fifth row of Table 13. The results of the ANOVA conducted for the posttest *total non-spelling errors per word score* were similar to those for the three groups, and there were significant differences between the adjusted mean posttest scores of the three subgroups, F (2, 47) = 6.05, p. = .005, $\eta 2$ = .205. Group B had the smallest mean (M = .077), Group A had a larger mean (M =.10), and Group C had the largest mean (M =.15). There was a significant difference between the posttest scores of Groups B and C, but no significant differences between the posttest scores of Groups A and C and between the posttest scores of Groups A and B.

Holistic Writing Measures

Writing-quality score. The mean pretest and posttest writing quality scores across the three groups are reported in rows one, four, and seven in Table 14. The ANCOVA conducted for the posttest *writing quality score* revealed significant differences between the mean adjusted posttest scores of the three groups, F (2, 110) = 5.35, MSE = 1.79, p.= .006, $\eta 2$ = .089. Group B had the largest mean (M =3.6), Group C had a smaller mean (M =2.82), and Group A had the smallest mean (M =2.8). The significant difference in posttest scores was found between Groups B and C, but not between Groups A and B or between Groups A and C.

The mean pretest and posttest quality scores across the three subgroups of students with FDCS are reported in rows three, six, and nine, in Table 14. The ANCOVA conducted for the posttest *writing quality score* indicated that there were significant differences between the mean adjusted posttest scores of the three groups, F (2, 47) = 5.41, MSE = 1.89, p.= .008, $\eta 2$ = .190. Group B had the largest mean (M

=3.63), Group A had a smaller mean (M =2.6) and Group C had the smallest mean (M =2.55). The posttest scores of Groups B and C were significantly different, but no significant differences were observed between Groups A and B, and between Groups A and C on this measure.

Statewide writing assessment score. The statewide writing assessment scores for the three groups of students are reported in Table 15. The results of the MANOVA indicated that there were significant differences among the three groups, Wilks' Λ= .746, F (14, 208) = 2.35, p.= .005, $\eta 2$ = .136. The follow-up one-way ANOVA, F (2, 110)= 8.15, p. = .001, $\eta 2$ = .129 indicated that the significant differences for the students' *overall scores* were between Groups B and A and between Groups B and C (both in favor of Group B). There were also significant differences observed between the students' trait scores (see Appendix G, Table G1 for ANOVA statistics) for *ideas and content, voice, organization,* and *conventions* between Groups B and C (in favor of Group B). The ANOVA conducted on the students' trait scores for *sentence fluency* and *word choice* revealed significant differences between Groups B and A and between Groups B and C (both in favor of Group B).

The frequency distribution of the students' scores on the statewide writing assessment is displayed in Figure 5. Approximately 56 percent of the students in Group B received overall mean scores at the satisfactory level (above three points on a five-point scale). The frequency distribution of students in the other two groups at this level was lower compared to students in Group B. Thirty percent of students in Group A and 35 percent of students in Group C received overall mean scores at the satisfactory level.

The comparisons conducted for the statewide writing assessment scores for the students with LD did not reveal significant differences between the subgroups. These scores are reported in Table 16. However, the frequency distribution of the

scores on the statewide writing assessment for students with LD indicated that students with LD in Group B fared better than their counterparts in the other two subgroups (see Figure 6). Approximately 50 percent of the students with LD in Group B received overall mean scores at the satisfactory level (above three points on a five-point scale), while only ten percent of students with LD in Group A and zero percent of students with LD in Group C received overall mean scores at this level.

The statewide writing assessment scores for the three subgroups of students with FDCS are reported in Table 17. The results of the MANOVA indicated that there were significant differences among the three subgroups of students with FDCS, Wilks' $\wedge = .511$, F (14, 82) = 2.34, $p = .009$, $\eta 2 = .285$. The follow-up ANOVA revealed significant differences for the students' *overall scores* between Groups B and C (in favor of Group B), F (2, 47)= 7.62, $p = .001$, $\eta 2 = .245$. The ANOVA conducted on the students' trait scores (see Appendix G, Table G1 for ANOVA statistics) indicated significant differences on all of the six traits between the students' scores in Groups B and C (in favor of Group B). There were no significant differences observed between the scores of Groups A and B and between the scores of Groups A and C.

The frequency distribution of the students' scores on the statewide writing assessment is displayed in Figure 7. Approximately 40 percent of the students with FDCS in Group B received overall mean scores at the satisfactory level (above three points on a five-point scale). The frequency distribution of students in the other two groups at this level was lower compared to students in Group B. Ten percent of students with FDCS in Group A and 12 percent of students with FDCS in Group C received overall mean scores at the satisfactory level.

Other Writing Measures

Text-structure score. The mean pretest and posttest text-structure scores across the three groups of students are reported in the first row of Table 18. The

ANCOVA conducted for the posttest *text-structure scores* indicated significant differences between the adjusted mean posttest scores of the three groups, F (2, 109) = 13.6, MSE = 6.70, p. < .001, η2 = .20. Group A had the largest mean (M =10.5), Group B had a smaller mean (M = 9.5), and Group C had the smallest mean (M =7.13). There were significant differences between the posttest scores of Groups A and C and between the posttest scores of Groups B and C, but none between the posttest scores of Groups A and B.

The comparison conducted for the posttest *text-structure scores* for the students with LD did not reveal significant differences between the subgroups. The mean pretest and posttest scores across the three subgroups are reported in the first row of Table 19.

The mean pretest and posttest text-structure scores across the three subgroups of students with FDCS are reported in the first row of Table 20. The ANCOVA conducted for the posttest *text-structure score* revealed significant differences between the adjusted mean posttest scores of the subgroups, F (2, 46) = 6.63, MSE = 6.78, p. = .003, η2 = .224. Group A had the largest mean (M =10.5), Group B had a smaller mean (M = 9.4), and Group C had the smallest mean (M =7.12). The posttest scores of Groups A and C and of Groups B and C were significantly different, but there was no significant difference between the posttest scores of Groups A and B.

Pre-writing planning time score. The mean pretest and posttest pre-writing planning time scores across the three groups of students are reported in the second row of Table 18. The ANCOVA conducted for the posttest *pre-writing planning time scores* indicated significant differences between the mean adjusted posttest scores of the groups, F (2, 110) = 57.1, MSE = 19.7, p. < .001, η2 = .51. Group A had the largest a mean (M =13.9), Group B had a smaller mean (M =8.7), and Group C had the smallest mean (M =2.4). There were significant differences between the posttest scores of Groups A and B, Groups A and C, and Groups B and C.

The comparison conducted for the posttest *pre-writing planning time scores* for the students with LD did not reveal significant differences between the subgroups. The mean pretest and posttest scores across the three subgroups are reported in the second row of Table 19.

The mean pretest and posttest pre-writing planning time scores across the three subgroups of students with FDCS are reported in the second row of Table 20. The ANCOVA conducted for the posttest *pre-writing planning time scores* revealed significant differences in the mean adjusted posttest scores of the subgroups, F (2, 47) = 15.2, MSE = 21.8, p. < .001, $\eta 2$ = .398. Group A had the largest mean (M =11.3), Group B had a smaller mean (M =7.5), and Group C had the smallest mean (M =2.4). There were significant differences between the posttest scores of Groups A and B, Groups A and C, and Groups B and C.

Essay length score. The comparison conducted for the posttest *essay length scores* did not reveal significant differences between the three groups or between the subgroups. The mean pretest and posttest scores across the three groups and subgroups are reported in the third rows of Table 18, 19, and 20, respectively.

Knowledge of the writing process score. The mean pretest and posttest knowledge of the writing process scores across the three groups of students are reported in the fourth row of Table 18. The ANOVA conducted for the posttest *knowledge of the writing process scores* indicated significant differences between the mean adjusted posttest scores of the groups, F (2, 110) = 30.2, p. < .001, $\eta 2$ = .355. Group A had the largest mean (M = 4.04), Group B had a smaller mean (M =3.34), and Group C had the smallest mean (M =1.35). The differences in the posttest scores between Groups A and C, and between Groups B and C were significant, but the difference between the posttest scores of Groups A and B were not significant.

The mean pretest and posttest knowledge of the writing process scores across the three subgroups of students with LD are reported in the fourth row of Table 19.

The ANOVA conducted for the posttest *knowledge of the writing process scores* revealed significant differences between the mean adjusted posttest scores of the subgroups, F (2, 11) = 10.1, p. = .003, $\eta 2$ = .647. Group A had the largest mean (M = 3.8), Group B had a smaller mean (M =2.0), and Group C had the smallest mean (M =.6). The follow-up tests indicated that the significant difference was between the posttest scores of Groups A and C, but not between the posttest scores of Groups B and C, and Groups A and B.

The mean pretest and posttest knowledge of the writing process scores across the three subgroups of students with FDCS are reported in the fourth row of Table 20. The ANOVA conducted for the posttest *knowledge of the writing process scores* indicated that the subgroups' adjusted mean posttest scores were significantly different, F (2, 47) = 19.9, p. < .001, $\eta 2$ = .459. Group A had the largest mean (M = 4.2), Group B had a smaller mean (M =3.7), and Group C had the smallest mean (M =1.2). There were significant differences between the posttest scores of Groups A and C and between the posttest scores of Groups B and C, but no significant difference between the posttest scores of Groups A and B.

Writing Affect Measures

The mean pretest and posttest hope scores and writing self-efficacy scores across the three groups and subgroups of students are reported in Appendix G, Table G2. The ANCOVAs conducted on the posttest *hope score* and posttest *writing self-efficacy score* indicated that there were no significant differences between the groups or subgroups on each of these dependent variables.

Social Validity Measures

Student satisfaction scores. The mean posttest student satisfaction scores across the groups are displayed in Appendix H, Table H1. The results of the MANOVA indicated that there was a significant difference among the three groups of students, Wilks' $\wedge$= .633, F (20, 200) = .256, p <.001, $\eta 2$ = .204. The follow-up

ANOVA (see Appendix H, Table H2) revealed that there were significant differences between scores of Groups A and Group C and between the scores of Groups B and C (in favor of the experimental groups) on the response to the statement, "*Writing in school is fun.*" The scores of Groups A and C were also significantly different (in favor of Group C) in response to the statement, "*Writing stories about myself is hard.*" Significant differences were also observed between the scores of Groups A and B (in favor of Group B) in response to the statement, "*I am confused when I take a writing test in school.* " Finally, there were significant differences between the groups (Group A had the highest mean ratings) in response to the statement, "*I am proud of the stories that I write.* " However, the mean scores for the items on the student satisfaction survey were varied, and there were no discernable patterns across the three groups or subgroups.

The mean posttest student satisfaction scores across the three subgroups of students with LD are displayed in Appendix H, Table H3. The results of the MANOVA for the subgroups of students with LD indicated that there were no significant differences among the scores of the subgroups. (See Appendix F, Table F1 for statistics.)

The mean posttest student satisfaction scores across the three subgroups of students with FDCS are displayed in Appendix H, Table H4. The results of the MANOVA for the subgroups of students with FDCS indicated that there were significant differences among the scores of the subgroups, Wilks' $\wedge = .459$, $\underline{F}\ (2, 46) = 1.76$, $\underline{p} = .042$, $\eta 2 = .323$. The scores of Groups A and B (in favor of Group A) were significantly different in response to the statement, "*I am confused when I take a writing test in school,*" $\underline{F}\ (2, 46) = 5.69$, $\underline{p}. = .006$, $\eta 2 = .199$.

Teacher satisfaction scores. The mean posttest teacher satisfaction scores calculated for each item from the teachers of the experimental classes are reported in Table 21. The item that received the highest rating from the teachers (M= 6.7 on a

seven-point scale) was in response to the statement, "*The Demand Writing Instructional Model intervention improved my students' writing.*" Overall, the teachers appeared to be extremely satisfied with the DWIM. Their mean ratings on the majority of the items were above 6 points on a seven-point scale. Fortunately, the item which received the lowest ratings from the teachers (M=3.7) was in response to the statement, "*The Demand Writing Instructional Model intervention was difficult for my students with learning disabilities.*"

Caregiver satisfaction score. The mean posttest caregiver satisfaction scores calculated for each item from the parents of students in the experimental classes are reported in Table 22. Overall, the parents seemed very satisfied with the DWIM. Their overall mean ratings on the majority of the items were close to 6 points on a seven-point scale. The two items that received the highest rating from the caregivers (M= 6.1) was in response to the statements, "*I think more teachers should use the Demand Writing Instructional Model program to teach writing at school,*" and "*I would recommend the Demand Writing Instructional Model program to other parents.*" Fortunately, the item that received the lowest mean rating from the caregivers (M= 3.8) was in response to the statement, "*The Demand Writing Instructional Model homework assignments were confusing for my child.*"

CHAPTER V

Discussion

The results of this study support the Demand Writing Instructional Model as an effective intervention that can be used to impact the writing performance of fifth-grade students with LD and low-performing students from culturally diverse background in inclusive general education settings. Several major conclusions can be drawn based on the results of this study. First, the DWIM favorably impacted the students' performance along a wide range of writing variables and measures: sentence writing, organization, correcting errors, writing quality, planning time, inclusion of text-structure elements, and knowledge of the writing process. Students in the experimental groups made substantial mean gains from pretest to posttest that resulted in significant differences between their posttest scores and the scores of the students in the comparison group on several of these measures.

Not surprisingly, the posttest scores of the experimental students with learning disabilities (LD) were lower than the scores of the overall groups. However, the students with LD in Groups A and B also made substantial mean gains from pretest to posttest and outscored their counterparts in the comparison group on several of the measures associated with writing strategies and other writing measures. In a few cases, the differences between the subgroups were significant.

The posttest scores of the students with field-dependent cognitive styles (FDCS) were slightly lower than the scores of the overall groups. However, the students with FDCS in the experimental groups made substantial mean gains from pretest to posttest and significantly outscored their counterparts in the comparison group on all of the measures except for the writing-affect measures.

Second, this study showed that a writing intervention can affect the performance of elementary students on a statewide writing assessment. Students in Group B significantly outscored both Groups A and C on the overall score, and their

mean score was within the *satisfactory* level for the state (i.e., between three points and four points). In fact, the distribution of the student scores for Group B was higher than the distribution of scores for Group C. Over half of the students (55%) in Group B earned overall scores above the 3.0 level, and 12 percent earned overall scores above the 4.0 level (considered to be *proficient* in the state), whereas 33 percent of the students in Group C earned scores above the 3.0 level, and 2 percent earned overall scores above the 4.0 level. Additionally, more students in Group C (22%) scored in the unsatisfactory level for the state (between one and two points) than students in Group A (13%) or Group B (2%).

A disappointing finding was that there were no significant differences between the subgroups of students with LD on the statewide writing assessment, and the mean overall scores for all three subgroups of students with LD were within the *basic* level for the state (i.e., between two points and three points). However, the distribution of scores for students with LD in Group B was higher than the distribution of scores for the students with LD in Group C. Twenty-five percent of the students with LD in Group B earned overall scores above the 3.0 level and 4.0 level respectively, whereas none of the students with LD in Group C earned scores at this level. Additionally, more students with LD in Group C (20%) scored in the unsatisfactory level for the state (between one and two points) than students with LD in Group A (10%) or Group B (0%).

A interesting finding was that the differential cognitive-style instruction seemed to mitigate the difference in overall mean scores on the statewide assessment between the students with FDCS in Groups A and B; there were no significant differences between the scores of these two subgroups although Group B had a higher mean posttest score. Additionally, students with FDCS in Group B significantly outscored the students with FDCS in Group C, and their mean scores approximated the *satisfactory* level for the state (i.e., between three and four points). The

distribution of scores for students with FDCS in Group B was higher than the distribution for Group C. Thirty-three percent of the students with FDCS in Group B earned overall scores above the 3.0 level, and seven percent earned overall scores above the 4.0 level (considered as *proficient* in the state), whereas 12 percent of the students in Group C earned scores above the 3.0 level, and no students earned overall scores above the 4.0 level. Additionally, more students with LD in Group C (32%) scored in the unsatisfactory level for the state (between one and two points) than students with LD in Group A (10%) or Group B (0%).

Relationship to Previous Research

This study filled in some of the gaps within the writing intervention and cognitive-styles literature on several levels. The DWIM was a comprehensive model for writing instruction that incorporated several types of interventions (e.g., learning strategies, process approach) rather than focusing on one specific type of intervention. The integrated writing interventions appear to have produced effects in writing measures beyond the measures that have been used in past studies. In previous studies, one of the main measures has been length of the students' essays, and this measure did not seem to differentiate the groups in the current study. Although the essays of Group C's students were as long as the essays of students in experimental groups, their scores on other measures remained low. In addition, the research was conducted in an urban setting where there was a high proportion of culturally and linguistically diverse students from low-income backgrounds. Furthermore, the study measured the effects of utilizing compatible instruction for writing for students with differential cognitive styles (e.g., field-dependent). Finally, the intervention focused on preparing students with LD and other low-performing students in general education classrooms for a statewide writing assessment. No other previous studies have done so.

This study extends the previous research of Schmidt et al. (1988) and Graham and Harris (1989) by teaching elementary students writing strategies in addition to instruction for pre-writing planning and narrative text structure. Unlike the adolescent students with LD in the original Schmidt et al. (1988) study, the elementary students in this study performed below the mastery levels for sentence writing, paragraph writing, and theme writing, and above the mastery level for error-monitoring. For example, when students in the Schmidt et al. (1988) study wrote a paper, 100 percent of their sentences were complete. When experimental students in this study wrote their posttest essay, about 70 percent of the sentences were complete. However, even though they were not formally taught to write all of the types of sentences associated with the Sentence Writing Strategy (Schumaker & Sheldon, 1999), the students in this study made some improvement in writing complicated sentences.

Limitations and Concerns

There are several limitations and concerns that apply to this study. First, although the students with LD improved their writing performance, their outcomes were not as high as expected. This may be partially the result of the limited amount of time for instruction (30 lessons). Another consideration is that the instruction was conducted in a whole-class setting, and the students with LD may have required more individualized attention and/or extra practice attempts. In either case, the results of the intervention for the students with LD indicate the need for more intensive instruction and/or different support networks for these students.

Similar to the students with LD, the students in Group A scored below what was expected on several of the writing measures. Although the reasons are not clear, there are several possible explanations for these outcomes. First, there was a greater proportion of students with LD in Group A than in Groups B and C (22%, 9%, and 9%, respectively). Besides having a greater proportion of students with LD, several of these students also displayed behavior problems. They were frequently sent to the

principal's office by the teacher assigned to the class, and thus missed multiple days of instruction during the writing intervention. Students with LD in Group A also missed more days of school (sometimes a whole week) than students with LD in the other groups for health or other unknown reasons. Moreover, the students in Group A (including students with LD and FDCS) spent a significantly greater amount of time on pre-writing planning during the posttest than the other two groups. Since the students were given a specified amount of time to complete their essays, this would have reduced the amount of time that they had left for writing and editing when compared to the other groups. Finally, students in Group A received the writing instruction during the last 30-45 minutes of the school day, so fatigue may have contributed to their lower performance.

Another limitation of the study was that the distinction between the two experimental conditions was not pure, and this may have reduced the impact of the differential cognitive-styles instruction used with Group A. For example, students in both groups were instructed with mnemonic devices to help them remember the Sentence Writing Strategy and the Error-Monitoring Strategy. Furthermore, both groups were taught story-grammar instruction which is considered to be beneficial for students with field-dependent cognitive styles. Finally, students in Group B received outlines during the lessons, probes, and posttests which may also be considered to be visual supports, and this may have contributed to their higher performance.

Additionally, this study lacked a long-term measure of maintenance. The statewide writing assessment could be considered as a short-term maintenance measure since it was conducted one week following the completion of the intervention. However, due to time constraints, there was no opportunity to collect a writing sample from the students after an extended amount of time. Showing the long-term effects of the DWIM would be an important area for future research.

Another concern is related to the effects of the various components of the DWIM. Although the effects of some of the components (e.g., sentence writing lessons) are known because of measures that were directly related to them (e.g., proportion of complete sentences scores), the effects of other components are not known because there were no measures directly related to them. For example, the contribution of the process writing approach is not clear. Therefore, future research needs to address the relative contributions of each of the components and whether or not they are all necessary to achieve the same effects with these students.

Finally, another limitation was the small numbers of students with LD in the study. Every attempt was made to select schools and classes that had the greatest proportion of students with LD. Thus, the number of students with LD in each group is representative of the proportion of students with LD in inclusive general education settings.

Areas for Future Research

Besides studying the maintenance of the writing performance, several other related areas for future research appear to be promising. First, with the growing demand associated with measuring student performance on large-scale assessments, an important area of research would be the development of an intervention that would affect students with LD on a statewide writing assessment. As stated earlier, one consideration would be to start intervening with these students earlier (e.g., fourth grade) and/or allow for more instructional time. This would give these students more opportunities for guided and/or independent practice. Another consideration would be to teach students with LD in paired or small-group arrangements so that they could receive more individualized feedback and attention.

Second, with the growing need to increase the academic achievement of low-performing students from culturally diverse backgrounds, a promising area of future research would be to confirm or to debunk the notion that these students have

differential cognitive styles and would benefit from instruction that is compatible with their cognitive style. In order to pursue this area of research, instruction in which the supporting devices for the field-dependent and field-independent cognitive styles are clearly separated should be evaluated. One suggestion would be to compare the performance of students with FDCS who receive visual representations (picture or outline) and/or story-grammar instruction with students with FDCS who do not receive these kinds of supports at all. Additionally, scores of students from culturally diverse or low-income backgrounds should be disaggregated from the overall group in order to evaluate differences in student performance due to cultural or poverty issues. In this study, the scores of culturally diverse students were not disaggregated from the larger group of students with FDCS due to the small sample sizes.

Implications for Education

The results of this study support the conclusion that educators can impact the writing performance of students in inclusive general education settings on a statewide assessment. Further research is necessary to evaluate how intensive and/or specialized the instruction for students with LD and low-performing students from culturally diverse backgrounds would need to be in order to enhance their performance on a statewide writing assessment. Since writing is an important ability that extends beyond the school setting, future research that contributes to the literature on effective writing interventions for these students would potentially enhance the quality of their lives.

The results of this study also suggest that general educators who teach a diverse group of students need to receive more extensive research-based curriculum materials and training for writing instruction. Approximately one-third of the students who received the traditional instruction endorsed by the district (Group C) earned scores at the 3.0 level or above (satisfactory) on the statewide writing assessment. During a teacher focus group prior to the intervention, the regularly

assigned teachers of the students in this study indicated that they felt ill-prepared to teach writing to their students because they had not received instruction on *how* to teach writing in their own teacher-training programs. Their responses on the teacher satisfaction survey confirmed the need for more professional development in effective writing interventions. Thus, in order to impact the writing performance of students on the statewide writing assessment and other large-scale assessments, teachers at the in-service and pre-service levels need additional training in comprehensive writing programs that addresses the multiple needs of a diverse group of learners. The data from this study suggest that when instruction in the writing process is explicit and comprehensive, beneficial student outcomes will follow.

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Table 1

Student Numbers and Demographic Data by Groups for All Students

	Group A		Group B		Group C	
Variable	Mean	Range	Mean	Range	Mean	Range
Age*	10.9	10.3-11.8	10.9	10.2-12.3	10.7	10.3-11.5
Variable	%	n	%	n	%	n
Gender						
Girls	48%	(11)	45%	(20)	46%	(21)
Boys	52%	(12)	55%	(24)	54%	(25)
Disability						
LD		5		4		5
ED		0		1		1
OHI		2		0		1
Race						
Caucasian	39%	(9)	36%	(16)	39%	(18)
African Amer.	30%	(7)	39%	(17)	52%	(24)
Hispanic	26%	(6)	16%	(7)	9%	(4)
Amer. Indian.	5%	(1)	7%	(3)	0%	(0)
Asian Amer.	0%	(0)	2%	(1)	0%	(0)

Table 1 (continued)

Variable	%	n	%	n	%	n
Lunch Status						
Full Pay	13%	(3)	23%	(10)	27%	(12)
Reduced	0%	(0)	16%	(7)	4%	(2)
Free	87%	(20)	61%	(27)	69%	(32)
Residential Status						
Both Parents	35%	(8)	27%	(12)	35%	(16)
One Parent (mom)	48%	(11)	57%	(25)	59%	(27)
One Parent (dad)	13%	(3)	9%	(4)	4%	(2)
Court Guardian	4%	(1)	0%	(0)	0%	(0)
Joint Custody	0%	(0)	7%	(3)	2%	(1)

Note. * Age reported in years and months. LD= learning disability, ED= emotional disability, and OHI= other health impairment

Table 2

Test Data by Groups for All Students

	Group A		Group B		Group C	
	Mean	SD	Mean	SD	Mean	SD
*MAT Scores						
Language Arts	37.6	20.3	42.8	24.4	43.9	19.8

Note. MAT= 4th grade Metropolitan Achievement Test and scores are reported as normal curve equivalent scores (standard scores with national mean=50, range 1-99, SD=21.06). SD= standard deviation.

Table 3

Demographic Data by Groups for Students with Learning Disabilities

	Group A		Group B		Group C	
Variable	Mean	Range	Mean	Range	Mean	Range
Age*	11.2	(10.6-11.8)	10.9	(10.33-11.7)	10.8	(10.4-11.2)
Variable	%	n	%	n	%	n
Gender						
Girls	20%	(1)	50%	(2)	0%	(0)
Boys	80%	(4)	50%	(2)	100%	(5)
Race						
Caucasian	20%	(1)	50%	(2)	40%	(2)
African Amer.	40%	(2)	25%	(1)	20%	(1)
Hispanic	40%	(2)	25%	(1)	40%	(2)
Amer. Indian.	0%	(0)	0%	(0)	0%	(0)
Asian Amer.	0%	(0)	0%	(0)	0%	(0)
Lunch Status						
Full Pay	0%	(0)	25%	(1)	0%	(0)
Reduced	0%	(0)	0%	(0)	0%	(0)
Free	100%	(5)	75%	(3)	100%	(5)

Table 3 (continued)

Variable	%	n	%	n	%	n
Residential Status						
Both Parents	0%	(0)	0%	(0)	20%	(1)
One Parent (mom)	60%	(3)	75%	(3)	60%	(3)
One Parent (dad)	20%	(1)	0%	(0)	0%	(0)
Court Guardian	20%	(1)	0%	(0)	0%	(0)
Joint Custody	0%	(0)	25%	(1)	20%	(1)

Note. * Age reported in years and months. LD= learning disability, ED= emotional disability, and OHI= other health impairment

Table 4

IQ and Achievement Test Scores by Groups for Student with Learning Disabilities

	IQ	Reading	Written Language
Group A			
Bobby	97	82	66
Maria	87	76	63
Jorge	71	73	54
Keith	101	85	82
Scott	92	83	73
Mean scores	89.6	79.8	67.6
Group B			
Sammy	93	83	76
Sheila	86	77	76
Michael	112	89	69
Summer	98	85	69
Mean scores	97.3	83.5	72.5
Group C			
Miguel	85	82	78
Francisco	--	74	56
Jeremiah	103	92	76
Aaron	92	85	69

Table 4 (continued)

	IQ	Reading	Written Language
Tommy	116	95	75
Mean scores	99	85.6	70.8

Note. IQ scores are full-scale IQ scores from the Wecshler Intelligence Scale for Children III. Reading scores are stanine scores from the Woodcock Johnson Achievement Test III (WJ- III). Written Language scores are stanine scores from the WJ-III. --Student score not available.

Table 5

Cognitive Styles by Groups

	Group A		Group B		Group C	
Cognitive Style	FD	FI	FD	FI	FD	FI
Ethnicity						
C/A	3	3	2	8	5	7
AA/H/AI	7	6	13	9	20	5

Note. FD= field-dependent cognitive style (Children's Embedded Figures Test score equal to or less than 11). FI= field-independent cognitive style (Children's Embedded Figures Test score equal to or more than 16). C/A= Caucasian and Asian-American students. AA/H/AI= African-American, Hispanic, and American-Indian students.

Table 6

Students with Field-Dependent Cognitive Styles Demographic Data by Groups

	Group A		Group B		Group C	
Variable	Mean	Range	Mean	Range	Mean	Range
Age*	10.9	(10.3-11.8)	10.9	(10.2-12)	10.7	(10.3-11.5)
Variable	%	n	%	n	%	n
Gender						
Girls	50%	(5)	33%	(5)	36%	(9)
Boys	50%	(5)	67%	(10)	64%	(16)
Race						
Caucasian	30%	(3)	13%	(2)	20%	(5)
African Amer.	50%	(5)	47%	(7)	72%	(18)
Hispanic	20%	(2)	33%	(5)	8%	(2)
Amer. Indian.	0%	(0)	7%	(1)	0%	(0)
Asian Amer.	0%	(0)	0%	(0)	0%	(0)
Lunch Status						
Full Pay	0%	(0)	25%	(1)	0%	(0)
Reduced	0%	(0)	0%	(0)	0%	(0)
Free	100%	(5)	75%	(3)	100%	(5)

Table 6 (continued)

Variable	%	n	%	n	%	n
Residential Status						
Both Parents	30%	(3)	20%	(3)	24%	(6)
One Parent (mom)	40%	(4)	67%	(10)	72%	(18)
One Parent (dad)	20%	(2)	7%	(1)	4%	(1)
Court Guardian	10%	(1)	0%	(0)	0%	(0)
Joint Custody	0%	(0)	7%	(1)	0%	(0)

Note: * Age reported in years and months.

Table 7

Test Data by Groups for Students with Field-Dependent Cognitive Styles

	Group A		Group B		Group C	
	Mean	SD	Mean	SD	Mean	SD
*MAT Scores						
Language Arts	32.4	18.7	39.5	20.7	36	15.7

Note. MAT= 4th grade Metropolitan Achievement Test and scores are reported as normal curve equivalent scores (standard scores with national mean=50, range 1-99, SD=21.06). SD= standard deviation.

Table 8

Elements of the Differential Instruction

Field-Dependent Cognitive Style	Field-Independent Cognitive Style
Story grammar picture representation	Story-grammar outline
Story grammar mnemonic phrase	No mnemonic phrase
Paragraph planning picture representation	Paragraph-planning outline
Theme planning picture representation	Theme-planning outline
Simplified language	Standard language

Note. Students in experimental Group A received instruction with the field-dependent cognitive style elements. Students in experimental Group B received instruction with the field-independent cognitive style.

Table 9

List of Dependent Variables

Category of Measures	Dependent Variables
Measures Associated with Writing Strategies	Proportion of complete sentences
	Proportion of complicated sentences
	Paragraph-writing score
	Theme-writing score
	Non-spelling errors per word score
Holistic-Writing Measures	Writing-quality score
	Statewide writing-assessment score
Other Writing Measures	Text-structure score
	Pre-writing planning-time score
	Essay length score
	Knowledge of writing-process score
Writing-Affect Measures	Hope score
	Writing self-efficacy score
Social Validity Measures	Student satisfaction scores
	Teacher satisfaction scores
	Caregiver satisfaction scores

Note. Statewide writing-assessment scores and student satisfaction scores are posttest only. Teacher and caregiver satisfaction scores are for experimental groups (posttest only).

Table 10

MANOVA and ANOVA of Pretest Scores by Groups and Subgroups

	All Students				
Source	Wilks ∧	df	F	η2	p
Measures AWS	.810	2, 110	2.36	.10	.012*
Holistic Writing Measures	--	2, 109	2.33	.041	.102
Other Writing Measures	.933	8,212	.941	.034	.484
Writing Affect Measures	.952	4, 214	1.35	.025	.254
	Students with Learning Disabilities				
Source	Wilks ∧	df	F	η2	p
Measures AWS	.495	10, 14	.589	.296	.798
Holistic Writing Measures	--	2, 11	1.18	.176	.344
Other Writing Measures	.456	8,16	.962	.325	.467
Writing Affect Measures	.374	2, 16	2.58	.388	.081
	Students with Field-Dependent Cognitive Styles				
Source	Wilks ∧	df	F	η2	p
Measures AWS	.705	10, 86	1.64	.160	.109

Table 10 (continued)

Source	Wilks ^	df	F	η2	p
Holistic Writing Measures	--	2, 47	1.53	.061	.227
Other Writing Measures	.827	8, 88	1.09	.090	.376
Writing Affect Measures	.854	4, 90	1.85	.076	.126

Note. AWS= Measures associated with writing strategies. *Significant difference between Groups B and C (in favor of Group C) on the *proportion of complicated sentences* ($p < .05$).

Table 11

Pretest and Posttest Scores for Measures Associated with Writing Strategies by Groups for All Students

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Proportion of Complete Sentences	.37 (.34)	.77 (.23)	.35 (.31)	.73 (.25)	.46 (.30)	.60 (.88)
Proportion of Complicated Sentences	.18 (.19)	.35 (.17)*	.12 (.15)	.37 (.21)**	.26 (.21)	.20 (.18)
Paragraph Writing Score	.24 (.13)	.45 (.14)*	.24 (.14)	.44 (.12)**	.29 (.14)	.29 (.15)
Theme Writing Score	.05 (.05)	.32 (.19)*	.07 (.11)	.33 (.16)**	.11 (.11)	.14 (.14)
Total Non-Spelling Errors Per Word	.13 (.08)	.10 (.05)	.09 (.06)	.085 (.05)**	.10 (.08)	.14 (.09)

Note. Posttest scores reported are adjusted mean posttest scores. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). ** Significant difference between scores of Groups B and C ($p < .05$).

Table 12

Pretest and Posttest Scores for Measures Associated with Writing Strategies by Groups for Students with Learning Disabilities

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Proportion of Complete Sentences	.22 (.30)	.58 (.36)*	.16 (.20)	.75 (.27)	.42 (.37)	.24 (.28)
Proportion of Complicated Sentences	.05 (.10)	.21 (.16)	.07 (.15)	.29 (.26)	.15 (.14)	.15 (.17)
Paragraph Writing Score	.18 (.06)	.37 (.20)	.20 (.09)	.40 (.12)	.27 (.06)	.27 (.11)
Theme Writing Score	.03 (.04)	.18 (.19)	.02 (.03)	.30 (.22)**	.05 (.03)	.02 (.05)
Total Non-Spelling Errors Per Word	.19 (.16)	.13 (.07)*	.13 (.05)	.14 (.04)**	.23 (.11)	.27 (.05)

Note. Posttest scores reported are adjusted mean posttest scores. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). ** Significant difference between scores of Groups B and C ($p < .05$).

Table 13

Pretest and Posttest Scores for Measures Associated with Writing Strategies by Groups for Students with FDCS

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Proportion of Complete Sentences	.37 (.36)	.74 (.29)	.31 (.33)	.67 (.27)	.33 (.30)	.61 (1.2)
Proportion of Complicated Sentences	.19 (.20)	.28 (.19)*	.06 (.11)	.33 (.20)**	.17 (.20)	.16 (.18)
Paragraph Writing Score	.25 (.11)	.42 (.16)*	.20 (.14)	.41 (.12)**	.25 (.14)	.24 (.15)
Theme Writing Score	.05 (.04)	.27 (.20)*	.05 (.08)	.28 (.18)**	.09 (.11)	.09 (.13)
Total Non-Spelling Errors Per Word	.16 (.12)	.10 (.04)	.11 (.08)	.08 (.05)**	.11 (.08)	.15 (.09)

Note. Posttest scores reported are adjusted mean posttest scores. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). ** Significant difference between scores of Groups B and C ($p < .05$).

Table 14

Pretest and Posttest Scores for Writing Quality by Groups and Subgroups

	pretest		posttest	
Groups	Mean	SD	Mean	SD
Group A				
All students	1.71	.85	2.78	1.0
Students with LD	1.6	.55	2.0	1.0
Students with FDCS	1.6	.69	2.6	1.1
Group B				
All students	2.21	1.4	3.6**	1.7
Students with LD	1.0	.82	2.3	1.7
Students with FDCS	1.53	1.1	3.6**	2.0
Group C				
All students	2.44	1.4	2.82	1.8
Students with LD	1.2	.45	1.8	0.8
Students with FDCS	2.1	1.2	2.5	1.5

Note. Posttest scores reported are adjusted mean posttest scores. LD= learning disability, FDCS= field-dependent cognitive style, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). ** Significant difference between scores of Groups B and C ($p < .05$).

Table 15

Statewide Writing Assessment Scores by Groups for All Students

	Group A	Group B	Group C
Variable	M (SD)	M (SD)	M (SD)
Overall	2.68 (.52)	3.13 (.60)**	2.62 (.72)
Ideas	2.77 (.56)	3.09 (.58)*	2.55 (.75)
Voice	3.02 (.52)	3.32 (.63)*	2.90 (.73)
Conventions	2.46 (.70)	3.14 (.75)*	2.56 (.86)
Organization	2.52 (.64)	3.01 (.70)**	2.52 (.81)
Word Choice	2.66 (.58)	2.98 (.59)*	2.58 (.70)
Sentence Fluency	2.61 (.74)	3.22 (.74)**	2.58 (.81)

Note. M= mean score, SD = standard deviation . * Significant difference between scores of Groups B and C ($p < .05$). **Significant differences between scores of Groups B and A, and Groups B and C ($p < .05$).

Table 16

Statewide Writing Assessment Scores by Groups for Students with Learning Disabilities

	Group A	Group B	Group C
Variable	M (SD)	M (SD)	M (SD)
Overall	2.07 (.48)	2.85 (.87)	2.30 (.37)
Ideas	2.20 (.58)	2.50 (.50)	2.40 (.29)
Voice	2.65 (.52)	3.13 (.1.03)	2.43 (.55)
Conventions	1.60 (.22)	2.94 (.97)	2.10 (.55)
Organization	2.00 (.56)	2.81 (.97)	2.30 (.41)
Word Choice	2.15 (.68)	2.81 (.85)	2.33 (.46)
Sentence Fluency	1.87 (.73)	2.94 (.1.3)	2.22 (.53)

Note. M= mean score, SD = standard deviation.

Table 17

Statewide Writing Assessment Scores by Groups for Students with Field-Dependent Cognitive Styles

	Group A	Group B	Group C
Variable	M (SD)	M (SD)	M (SD)
Overall	2.56 (.51)	2.95 (.53)*	2.25 (.57)
Ideas	2.68 (.46)	2.92 (.51)*	2.21 (.64)
Voice	2.98 (.56)	3.20 (.58)*	2.60 (.60)
Conventions	2.33 (.65)	2.88 (.79)*	2.15 (.69)
Organization	2.30 (.44)	2.80 (.61)*	2.15 (.67)
Word Choice	2.65 (.69)	2.90 (.51)*	2.25 (.59)
Sentence Fluency	2.43 (.75)	2.96 (.72)*	2.12 (.66)

Note. M= mean score, SD = standard deviation. * Significant difference between scores of Groups B and C ($p < .05$).

Table 18

Pretest and Posttest Scores for Other Writing Measures by Groups for All Students

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Text-structure score	7.3 (2.4)	10.5 (2.4)*	5.9 (2.7)	9.4 (2.8)**	6.1 (2.8)	7.1 (2.9)
Pre-writing planning time score	.04 (.21)	13.9 (6.1)***	.84 (1.8)	8.7 (3.9)**	.80 (2.4)	2.4 (4.0)
Essay length score	147 (100)	170 (66)	151 (124)	175 (63)	167 (109)	148 (87)
Knowledge of writing process score	2.04 (1.4)	4.04 (1.5)*	2.16 (1.4)	3.3 (1.8)**	2.21 (1.6)	1.4 (1.3)

Note. Posttest scores reported are adjusted mean posttest scores. Pre-writing planning time score reported in minutes. Essay length score reported in number of words. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). ** Significant difference between scores of Groups B and C ($p < .05$). ***Significant difference between scores of Groups A and B, and Groups A and C ($p<.05$).

Table 19

Pretest and Posttest Scores for Other Writing Measures by Groups for Students with Learning Disabilities

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Text-structure score	7.6 (3.4)	9.2 (3.1)	4.0 (2.8)	7.3 (2.9)	4.6 (3.3)	5.2 (2.9)
Pre-writing planning time score	.00 (0)	10.2 (7.8)	.75 (1.5)	7.8 (.5)	.00 (0)	2.4 (3.4)
Essay length score	140 (124)	167 (107)	144 (173)	113 (14)	97 (77)	77 (24)
Knowledge of writing process score	1.4 (1.5)	3.8 (1.3)*	2.8 (1.5)	2.0 (1.4)	1.4 (1.1)	.6 (.54)

Note. Posttest scores reported are adjusted mean posttest scores. Pre-writing planning time score reported in minutes. Essay length score reported in number of words. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$).

Table 20

Pretest and Posttest Scores for Other Writing Measures by Groups for Students with Field-Dependent Cognitive Styles

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Text-structure score	7.2 (2.6)	10.5 (2.6)*	5.1 (2.6)	9.4 (2.9)**	5.9 (2.8)	7.1 (3.0)
Pre-writing planning time score	.00 (0)	11.3 (6.9)***	.73 (1.6)	7.5 (3.9)**	.60 (2.2)	2.4 (3.9)
Essay length score	116 (87)	171 (74)	165 (175)	180 (7!)	153 (107)	142 (80)
Knowledge of writing process score	2.5 (1.2)	4.2 (1.8)*	2.1 (.96)	3.7 (1.7)**	1.76 (1.5)	1.2 (1.3)

Note. Posttest scores reported are adjusted mean posttest scores. Pre-writing planning time score reported in minutes. Essay length score reported in number of words. M = group mean, SD= group standard deviation. *Significant difference between scores of Groups A and C ($p < .05$). **Significant difference between scores of Groups B and C ($p < .05$). ***Significant difference between scores of Groups A and B, and Groups A and C ($p < .05$).

Table 21

Mean Posttest Scores for the Teacher Satisfaction Survey for the Experimental Groups

Statement	Mean	SD
Writing tasks are difficult for my students to master.	6.0	1.0
I need more training in strategies to teach writing to my students.	6.0	0.0
The DWIM intervention improved my students' writing.	6.7	.58
The DWIM intervention improved the writing of my students with learning disabilities.	6.3	.58
Before the intervention, I was confident in my ability to prepare all of my students for the statewide writing assessment.	5.3	.58
The DWIM intervention prepared my students for the statewide writing assessment.	6.3	.58
I would like to have the DWIM intervention in the form of a teacher's manual.	6.3	.58
The DWIM was difficult for my students with learning disabilities.	3.7	1.5
I would use the DWIM intervention with my students in the future.	6.3	.58

Note. Teacher ratings applied on a seven-point scale with seven being the highest score. DWIM = Demand Writing Instructional Model, SD= standard deviation.

Table 22

Mean Posttest Scores for the Caregiver Satisfaction Survey for the Experimental Groups

Statement	Mean	SD
My child works hard on writing-related tasks.	5.6	1.9
I know how to help my child improve his/her writing.	5.8	1.2
Writing is easier for my child now because of the DWIM program.	5.7	1.2
The DWIM intervention improved my child's writing.	5.8	1.1
My child is more confident in his/her writing ability because of the DWIM program.	5.8	.79
The DWIM program prepared my child for the statewide writing assessment.	5.8	1.1
The writing homework assignments of the DWIM helped improved my child's writing.	5.8	1.1
I think that more teachers should use the DWIM program to teach writing at school.	6.1	.99
The DWIM homework assignments were confusing for my child.	3.8	1.2
I would recommend the DWIM program to other parents.	6.1	.73

Note. Caregiver ratings applied on a seven-point scale with seven being the highest score. DWIM = Demand Writing Instruction Model, SD= standard deviation.

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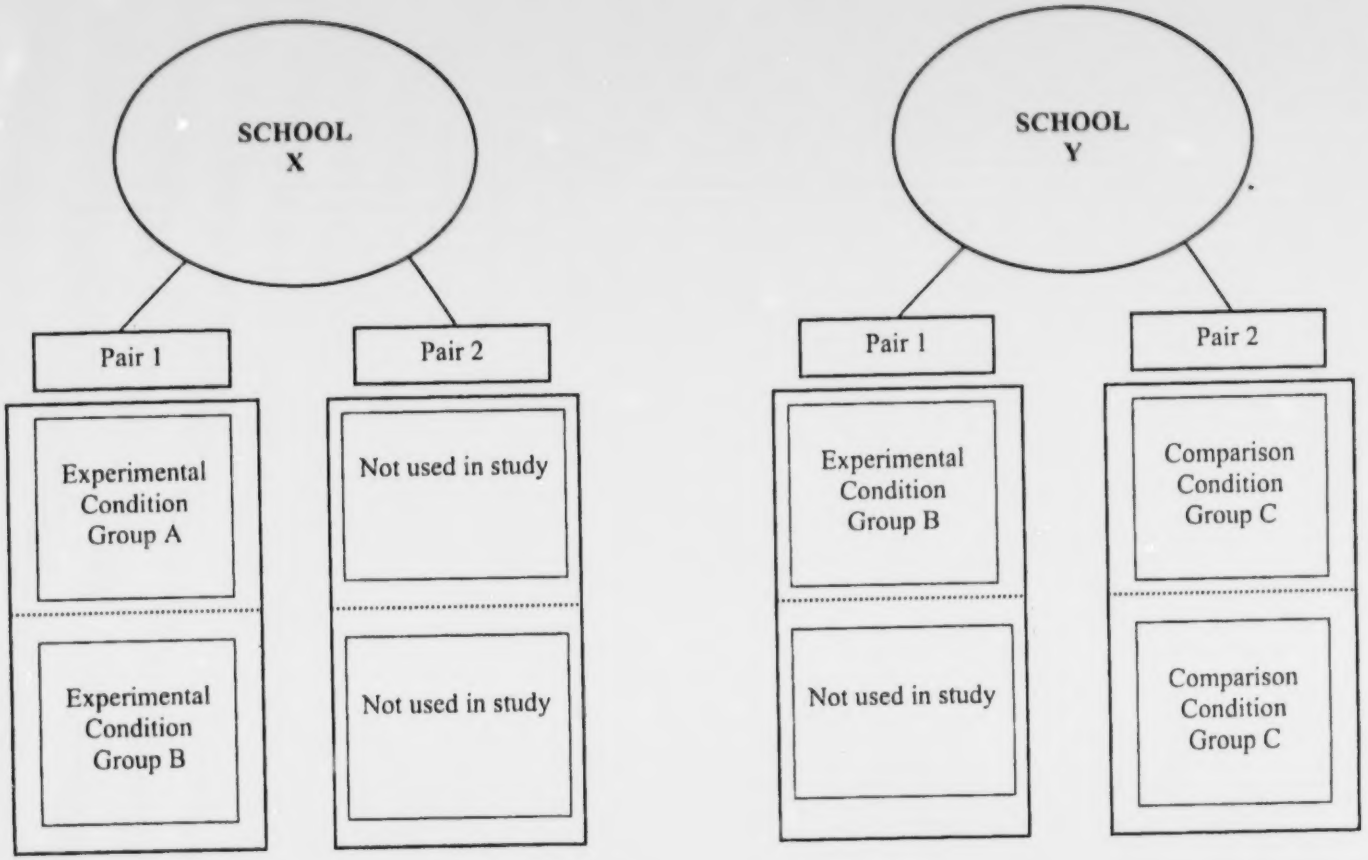

Figure 1. Classroom configurations and assignment to conditions.

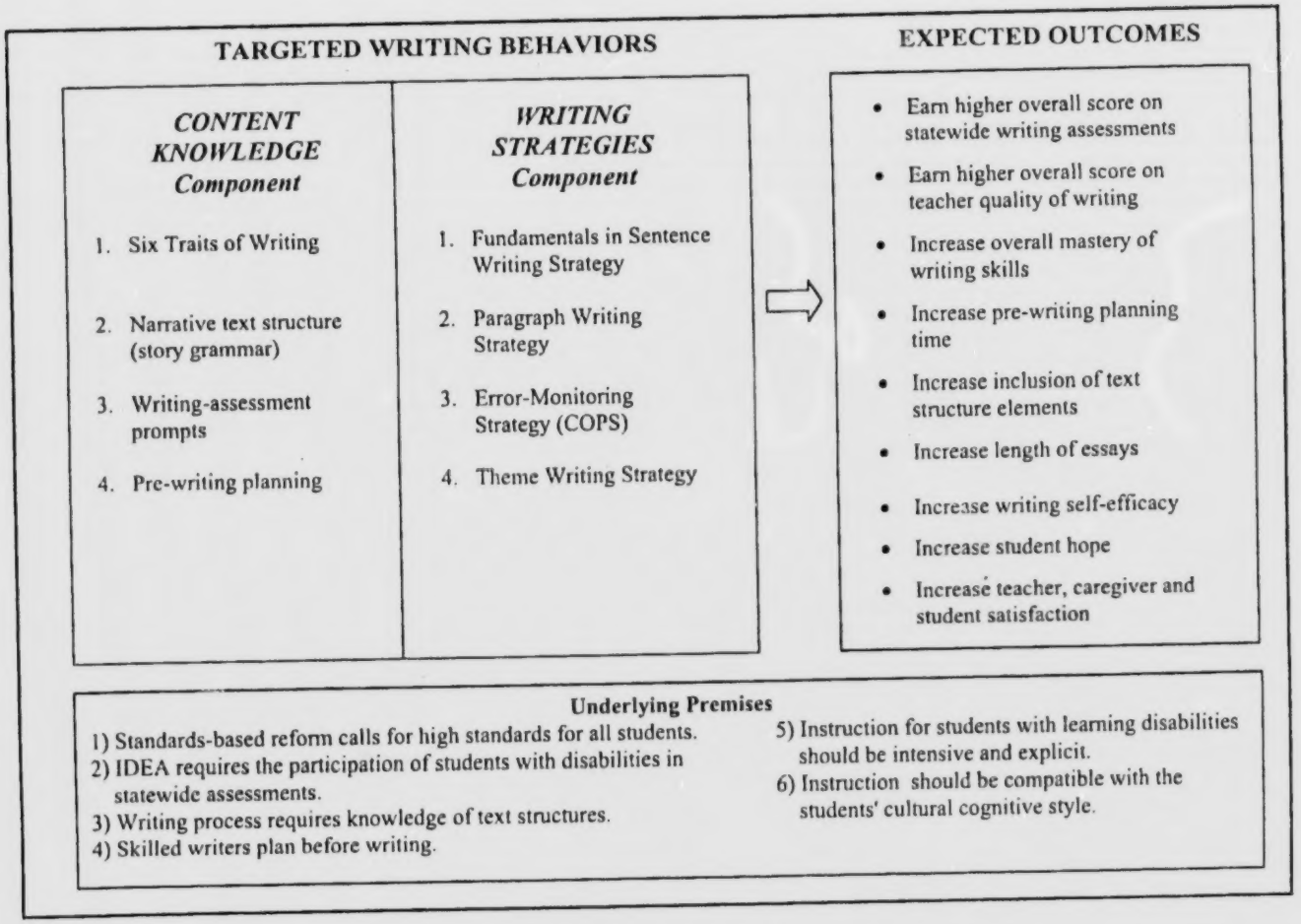
TARGETED WRITING BEHAVIORS
EXPECTED OUTCOMES
CONTENT KNOWLEDGE Component
1. Six Traits of Writing
2. Narrative text structure (story grammar)
3. Writing-assessment prompts
4. Pre-writing planning
WRITING STRATEGIES Component
1. Fundamentals in Sentence Writing Strategy
2. Paragraph Writing Strategy
3. Error-Monitoring Strategy (COPS)
4. Theme Writing Strategy
• Earn higher overall score on statewide writing assessments
• Earn higher overall score on teacher quality of writing
• Increase overall mastery of writing skills
• Increase pre-writing planning time
• Increase inclusion of text structure elements
• Increase length of essays
• Increase writing self-efficacy
• Increase student hope
• Increase teacher, caregiver and student satisfaction
Underlying Premises
1) Standards-based reform calls for high standards for all students.
2) IDEA requires the participation of students with disabilities in statewide assessments.
3) Writing process requires knowledge of text structures.
4) Skilled writers plan before writing.
5) Instruction for students with learning disabilities should be intensive and explicit.
6) Instruction should be compatible with the students' cultural cognitive style.

Figure 2. Conceptual framework of Demand Writing Instruction Model

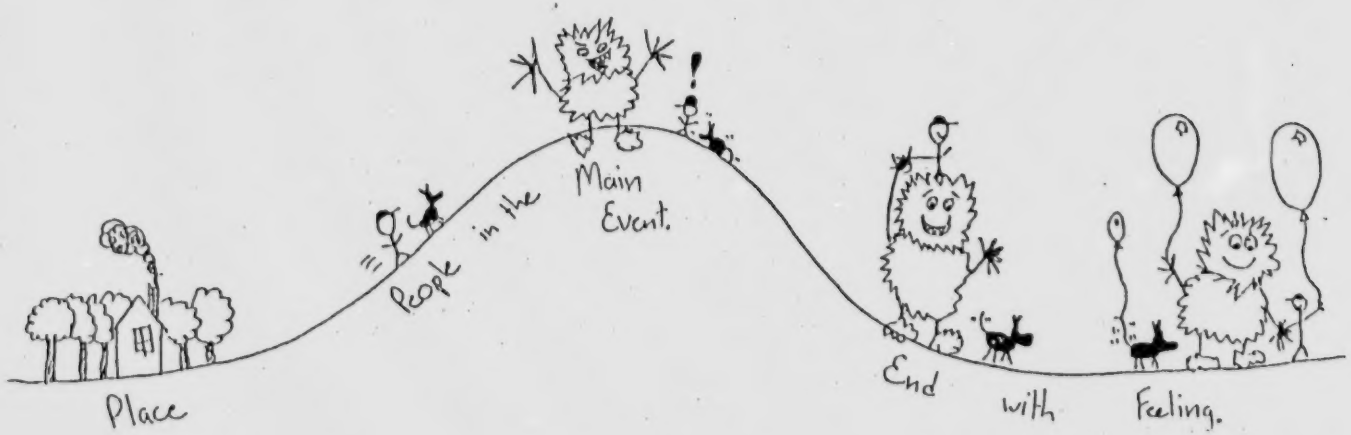
Story Grammar Picture Map
Think about an event (good or bad) that happened to you and fill in the story grammar parts related to your experience.
Place
People in the
Main Event.
End with Feeling.

Figure 3. Pictorial Representation of Story-Grammar Elements

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Story Grammar Outline

Setting: Where & When?

- place_____

- time_____

Characters: Who?

- main character(s)_____

_____

- supporting character(s)_____

_____

Main Event: What happened?

- something important_____

_____

- big problem_____

_____

Conclusion: How did it end?

- solution_____

_____

Reaction: How did the main character(s) feel?

- emotion_____

Figure 4. Outline Representation of Story-Grammar Elements

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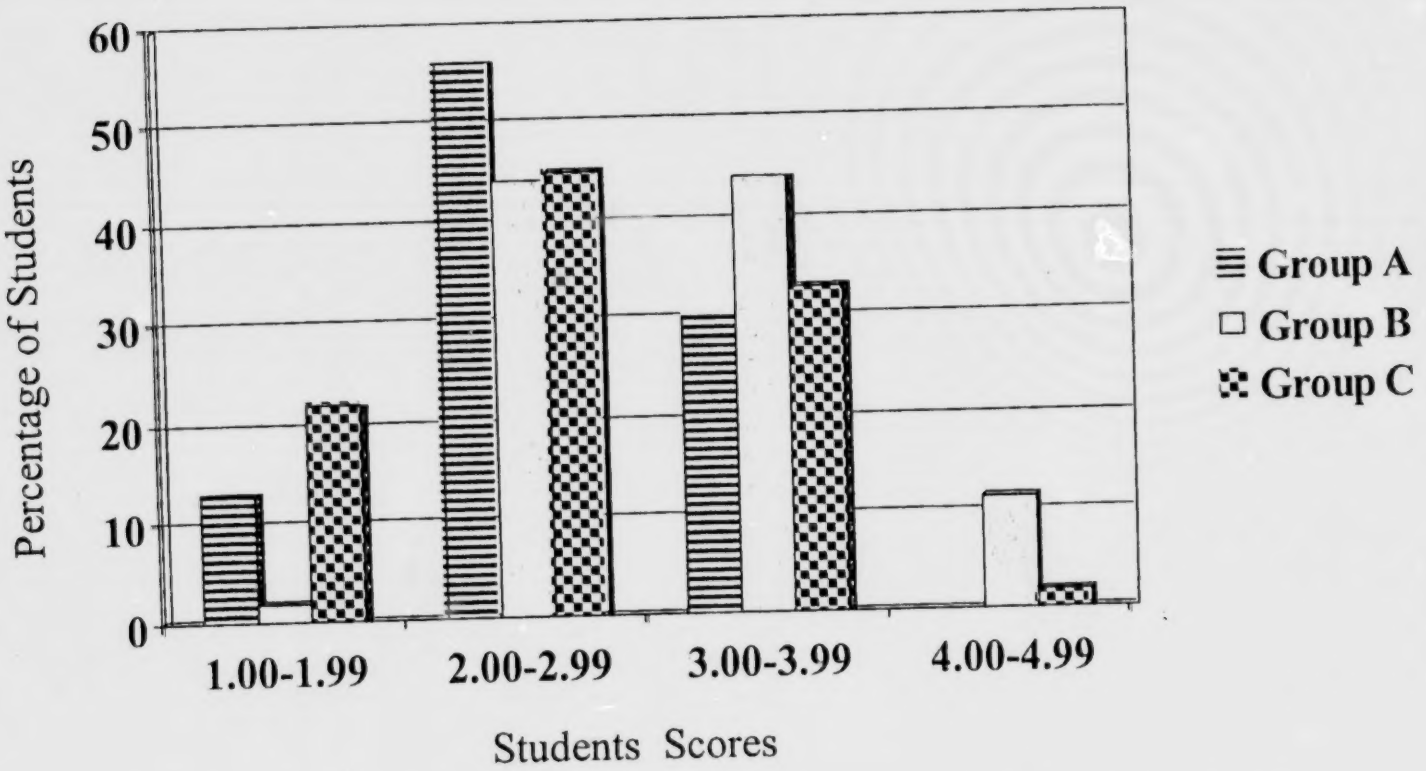

Figure 5. Distribution of Scores on the Statewide Writing Assessment by Groups for All Students

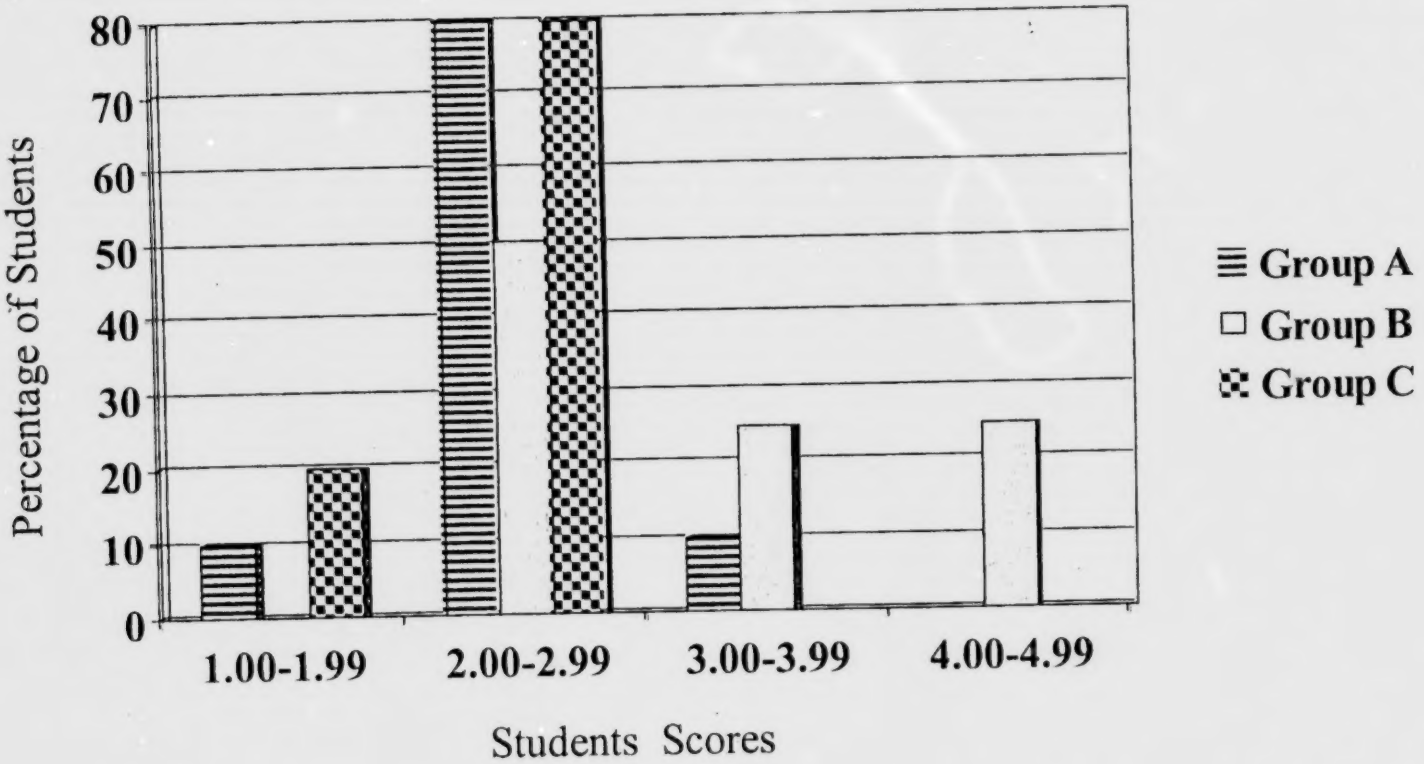

Figure 6. Distribution of Scores on the Statewide Writing Assessment by Groups for Students with Learning Disabilities

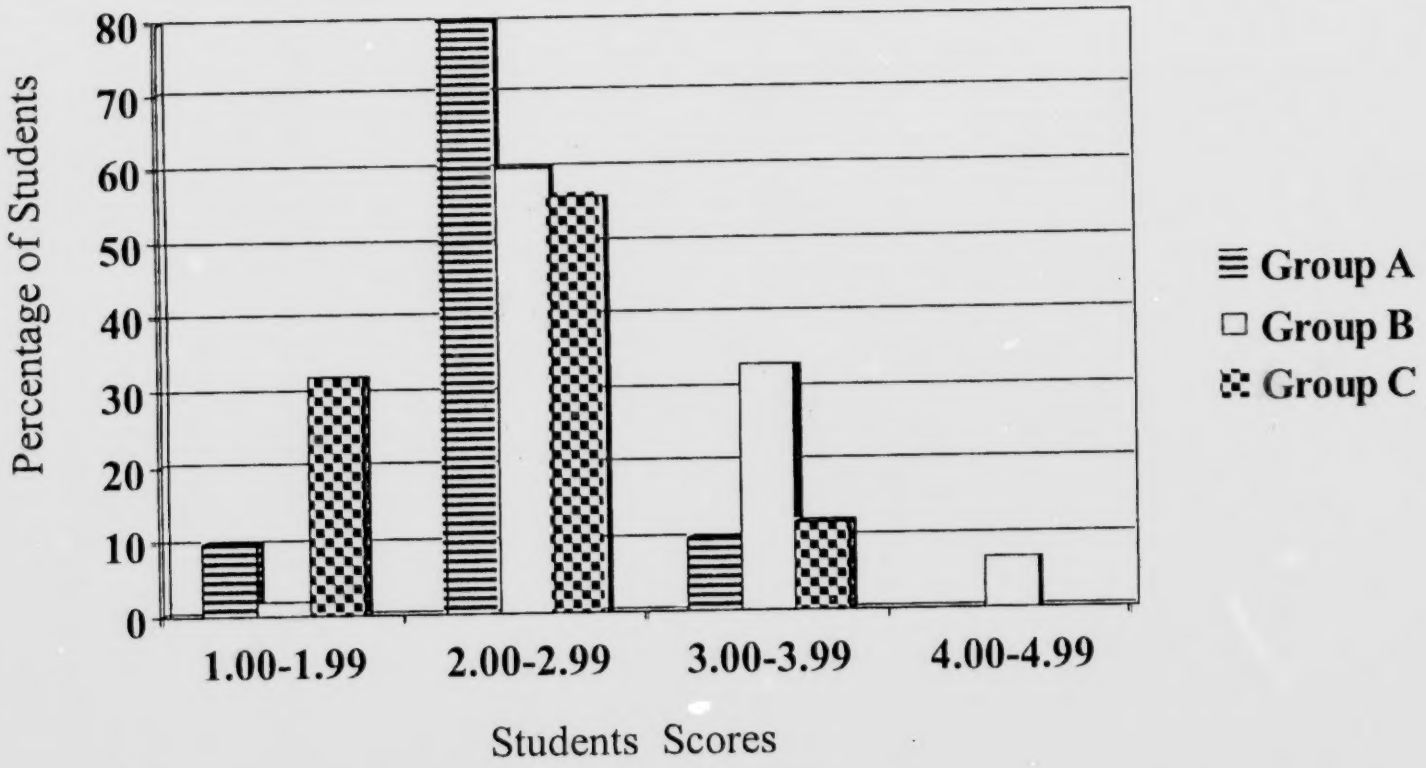

Figure 7. Distribution of Scores on the Statewide Writing Assessment by Groups for Students with Field-Dependent Cognitive Styles

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Appendix A

Sample Lesson Plan

Six Traits Writing

LESSON #2

Objective: Explain the writing process and teach students the Six Traits of writing.

Concepts: 1) outline the stages of the writing process (plan, write rough draft, revise, edit, publish)
2) define the six traits of writing (ideas, voice, conventions, organization, word choice, sentence fluency)

Key vocabulary word(s): plan. rough draft. revise, edit, publish, ideas, organization, voice, word choice, sentence fluency, conventions

Materials:
1) overhead projector, white board
2) overhead: IV-COWS mnemonic (and copies for all students)
3) teacher copy: "My Trip to Disneyland" (original & revised)
4) six index cards with one trait written one each card
5) 6 white poster boards
6) pencils, crayons, & markers
7) Student copies: "The Day Snowy Died"

Whole Group instruction: Write all student responses on overhead or white board.

- Advance organizer: Tell students that one of the goals of the Demand Writing Instruction Model is to improve the students' writing skills so that they become great writers. Explain to them that no one is born a great writer and that writing is a process that takes time and a lot of hard work. Show students a popular children's book

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(e.g., Harry Potter) and ask "What stages or steps do you think the author had to go through to write this book?"

- Write down the students' responses (without regard to order) making sure to add any stages that were left out. Ask students to indicate which stage they think is first, second, and so on.
- Explain to students that there is more to great writing than just following the stages of the writing process. As an example, read to students the original version of "My Trip to Disneyland." Ask them whether or not they liked the story and why. Next, read to students the revised version of " My Trip to Disneyland." Ask students which version they liked better and ask, "What did the second version have that the first version did not have?"
- Write down the students' responses (e.g., funny details, interesting words) and tell them that some of the things that they mentioned are part of the Six Traits of Writing.
- Activity: Show students the IV-COWS overhead and pass out the student copies. Have students read aloud each of the traits and define them individually elaborating with examples where appropriate. Give students a few minutes to memorize the IV-COWS mnemonic. Next, have the students verbally rehearse the six traits in small groups at their tables (rapid fire).

Small group/partner activity (15 minutes): Explain to students that they will work together to create posters that clearly display each of the six writing traits. Brainstorm ideas of what students could draw/write on their posters that would help them to remember the specific trait. Group students evenly so that there are six small groups. Give each group an index card of one written trait and a large poster board. Students can use crayons and markers to create their posters

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Group sharing: Students will share their posters and explain their trait to the rest of the class. The posters will be displayed in the classroom for everyone to see.

Methods for feedback: Questions/comments from the audience (i.e. teacher, other students).

Expected outcomes: Students will become familiar with the writing process. In addition, students will be able to recite and define each of the six traits. In small groups, students will create posters that clearly display each of the six traits.

Homework assignment: Students will read a one-page story "The Day Snowy Died" and list reasons why they liked/disliked the story and write suggestions on how the author could have improved the story based on the six traits of writing.

Summary/observations/modifications to lesson:

Carry over to next lesson:

Appendix B

Scoring Procedures and Measurement Instruments

1. Scoring Procedures for Sentence Writing Strategy
2. Scoring Procedures for Paragraph Writing Strategy
3. Scoring Procedures for Error Monitoring Strategy
4. Scoring Definitions for DWIM Theme Writing
5. Six Traits of Writing Rubric
6. Story Grammar Element Checklist
7. Knowledge of the Writing Process Interview
8. Student Hope Scale
9. Story Writing Self-Efficacy Scale
10. Student Satisfaction Survey
11. Teacher Satisfaction Survey
12. Caregiver Satisfaction Survey

APPENDIX A: EVALUATION GUIDELINES
SENTENCE SCORING INSTRUCTIONS

Scoring Steps

Each product will consist of one or more sentences written on a piece of paper. Review the products carefully to score each sentence. The evaluation process for a product containing six sentences should take no more than 2-3 minutes once you understand the scoring process and the definitions. You may train a paraprofessional or volunteer to do the scoring. If so, be sure to train the person as you were trained to score products. Have the person read these instructions. Then have the person score a product, receive feedback from you, score another product, receive feedback from you, and so forth, until the person's scoring agrees perfectly with yours on two or three consecutive products. Thereafter, check the person's scoring periodically to determine whether he continues to apply the definitions appropriately.

Regardless of who scores the product, the same five-step procedure is used.

1. **Number the lines of writing.** In the left-hand margin of the student's paper, place a number next to each line of writing. Place the #1 on the line on which the first sentence begins, the #2 on the next line, and so forth. These line numbers will help you give quick and efficient feedback to your students. In addition, they will allow you to quickly match up your scores with another person's scores.

2. **Determine where a sentence begins and ends.** The beginning of a sentence can be designated through the use of (a) a capital letter in the first letter of the first word of the sentence, (b) an end punctuation mark after the last word of the previous sentence, or (c) both punctuation and capitalization. The end of a sentence can be designated through the use of (a) end punctuation after the last word of the sentence, (b) a capital letter of the first letter of the first word of the next sentence, or (c) both punctuation and capitalization. ***Whatever appears on the paper is evaluated as it stands.*** For example, if a period appears in what you would think should be the middle of a sentence, treat it as an end punctuation mark, and evaluate the words in front of the period as if they were supposed to be a sentence. Never second-guess the student.

3. **Read a sentence and determine the category to which it belongs.** Once you have determined where a sentence begins and ends, read the sentence carefully. Use the definitions and examples below to determine what kind of a sentence it is.

4. **Record the sentence on the *Sentence Score Sheet*.** After you have determined the type of sentence that has been written, record it on the *Sentence Score Sheet*. Place a checkmark (✓) or appropriate code (see below) in the box under the number that corresponds to the line number of the first word of the sentence and next to the correct category. For example, if a complex sentence starts on line 5 of the paper, place your checkmark in the box that appears under the number 5 and next to the label "Complex Sentence."

5. **Repeat steps 2 through 4 for each sentence.**

Sentence Definitions

The definitions for each type of sentence are as follows. (For more information and examples, see the *Instructional Methods* or read the chapters in an English textbook on sentence writing.)

Simple Sentence

A simple sentence is a group of words with one independent clause. A simple sentence may contain a single subject and a single verb, a compound subject and a single verb, a single subject and a compound verb, or a compound subject and a compound verb. The sentence must be complete (no words left out) in order to be scored as a simple sentence.

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Examples*	Explanations
S V The boy ran to the store.	(Simple sentence with single subject, single verb.)
S S V The boy and girl ran in a relay race.	(Simple sentence with compound subject, single verb.)
S V V Kevin went to the party and had a wonderful time.	(Simple sentence with single subject, compound verb.)
S S V V Sally and Susan are friends and play together often.	(Simple sentence with compound subject, compound verb.)

Compound Sentence

A **compound sentence** consists of *two* or more independent clauses. In order to be scored as a compound sentence, two independent clauses must be joined *either* by a comma and a coordinating conjunction *or* by a semicolon. Sentences with three or more independent clauses must have commas separating the initial independent clauses and a comma and a coordinating conjunction separating the final two independent clauses *or* semicolons separating all the independent clauses. The sentence must be complete (no words left out). If a comma is missing, but the coordinating conjunction is present, place "NP" ("not punctuated correctly") in the appropriate compound sentences box. If the comma *and* the conjunction are missing *or* if a semicolon is missing, the sentence will be scored as a run-on sentence (see below).

Coordinating Conjunctions:

for	but
and	or
nor	yet
	so

Examples	Explanations
The boy ran to the store, and he bought some apples.	(Compound sentence with a comma and a coordinating conjunction separating the two independent clauses.)
Angels and devils came to the costume party; they got along fine.	(Compound sentence with a semicolon separating the two independent clauses.)
The baker wore chef's hat, the firefighter wore a helmet, but the farmer wore no hat at all.	(Compound sentence with three independent clauses separated by commas and a coordinating conjunction [but].)
The baker wore a chef's hat; the firefighter wore a helmet; the farmer wore a straw hat.	(Compound sentence with three independent clauses separated by semicolons.)

Note: Sometimes conjunctive adverbs are used in a compound sentence in which the independent clauses are joined with a semicolon.

Common Conjunctive Adverbs:

accordingly	however	otherwise
also	instead	similarly
anyhow	likewise	still
besides	meanwhile	then
consequently	nevertheless	therefore
furthermore	next	thus

Examples	Explanations
Angels and devils came to the costume party; however, they got along fine.	(Compound sentence with the conjunctive adverb at the beginning of the second clause.)
Angels and devils came to the costume party; they, however, got along fine.	(Compound sentence with the conjunctive adverb in the middle of the second clause.)
Angels and devils came to the costume party; they got along fine, however.	(Compound sentence with the conjunctive adverb at the end of the second clause.)

* Subjects are marked by an 'S' and verbs by a 'V.'

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Complex Sentence

A **complex sentence** consists of one independent clause and ***one or more*** dependent clauses. Each clause ***must*** have a subject and a verb. A dependent clause ***must*** include a subordinating word, a subject, and a verb. (See Notes 1 and 2 below for allowed exceptions to this requirement.) In order to be scored as a complex sentence, the sentence must be complete (no words left out).

Common Subordinating Conjunctions:

after	even if	since
although	even though	so that
as	if	than
as if	in order that	though
as long as	just as	unless
as soon as	like	until
as though	once	when
because	provided	whenever
before	rather than	while

The dependent clause in a complex sentence may be an adverb clause, an adjective clause, or a noun clause.

Complex sentences with adverb clauses.* An **adverb clause** tells when, why, how, where, under what conditions, or with what result an action took pace. The adverb clause may come before or after the independent clause. If it precedes the independent clause, a comma must be used to separate it from the independent clause. If the dependent clause follows the independent clause, a comma is not required. For this type of complex sentence, record a checkmark next to "Complex Sentence" on the score sheet. It the student omits a comma where it is required, place "NP" in the appropriate box on the *Sentence Score Sheet.*

Examples**	**Explanations**
Because baseball involves so much strategy, it is my dad's favorite game.	(Complex sentence with the dependent clause first and a comma separating the clauses.)
Baseball is my dad's favorite game because it involves so much strategy.	(Complex sentence with the dependent clause after the independent clause. No comma is required to separate the clauses.)
Because you are my friend, I will support you unless you have lied to me.	(Complex sentence with one independent clause and two dependent clauses. A comma is used to separate the dependent clause only when it comes ***before*** the independent clause.)

Complex sentences with adjective clauses. An **adjective clause** modifies or tells more about a noun or a pronoun in the independent clause. The relative pronouns who, whom, whose, whoever, whomever, that, which, whichever, what, and whatever are used as the subordinating words in this type of clause as are some of the subordinating conjunctions (e.g., when, whenever, where, wherever). The adjective clause should immediately follow the word(s) it modifies. Thus, it can appear in the middle of an independent clause or at the end of the clause, depending on where the modified word occurs.

A comma (or commas) must be used to separate nonrestrictive adjective clauses from the rest of the sentence. That is, if the adjective clause is merely used to give additional explanatory detail about a noun or pronoun, it should be set off with commas. If the clause is restrictive (i.e., used to identify a particular person, place or thing) no commas should be used. That is, when the dependent clause is important to the meaning of the independent clause, no commas are needed because the dependent clause is an integral part of the independent clause. For this type of complex sentence, record a checkmark next to "Complex Sentence" on the *Sentence Score Sheet.* *** If the comma (or commas) is missing in a sentence where the adjective clause is nonrestrictive, put "NP" in the scoring box.

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* This is the type of complex sentence that is taught in the *Instructional Methods* section of this manual.

** Independent clauses are underlined with two lines; dependent clauses are underlined with one line.

*** If you want to keep track of this type of complex sentence separately from the type of complex sentence that you are teaching (the complex sentence with an adverb clause), you can use a different symbol than a checkmark. For example, you can use an "A."

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Examples*	Explanations
The dog that Jim kept tied to his garage barked at us.	(The adjective clause modifies "dog" and is restrictive [it identifies a particular dog]; therefore, commas are not used. The adjective clause is inside the independent clause.)
Jane likes the boy whom Kathy despises.	(The adjective clause modifies "boy" and is restrictive [it identifies a particular boy]; therefore, commas are not used. The adjective clause appears after the independent clause since the word it modifies is the last word of the independent clause.)
Shovels, which workers use for digging, come in many shapes and sizes.	(The adjective clause modifies "shovels" and is nonrestrictive [it just adds information to the sentence]; therefore, commas are used. The adjective clause is inside the independent clause; thus, two commas are needed.)
The shovels which Paul painted brown are drying outside.	(The adjective clause modifies "shovels" and is restrictive [it identifies particular shovels]; therefore, commas are not used. The adjective clause is inside the independent clause.)
Karen went to the prom with Steve Jones, whose family recently moved here.	(The adjective clause modifies "Steve Jones" and is not restrictive [Steve Jones is already clearly identified, so the clause merely adds information to the sentence]; therefore, a comma is used. The adjective clause is at the end of the sentence.)
Paul used one of the shovels which he had painted brown.	(The adjective clause modifies "shovels" and is restrictive [it identifies particular shovels]; therefore, a comma is not used. The adjective clause is at the end of the sentence.)

Note 1: Sometimes the subordinating conjunction serves as the subject of the adjective clause. This is acceptable, and sentences using this form should be scored as complex sentences.

Examples	Explanations
Jill, who has long blond hair, often wears pigtails.	(In the adjective clause, "who" serves as the subordinating conjunction *and* as the subject of the clause.)
Jesse could not wait to see Dakota, who had been away for a year.	(In the adjective clause, "who" serves as the subordinating conjunction *and* as the subject of the clause.)
The storm, which had been raging for 4 hours, began to abate.	(In the adjective clause, "which" serves as the subordinating conjunction *and* as the subject of the clause.)

Complex sentences with noun clauses. A noun clause takes the place of a noun in the independent clause. Thus, it is a part of the independent clause; it can serve as the subject, direct object, indirect object, predicate nominative, or as the object of the preposition in the independent clause. For complex sentences with noun clauses, record a checkmark next to "Complex Sentence" on the *Sentence Score Sheet.***

Examples	Explanations
Why Mike wants to run a marathon is unclear to me.	(The dependent clause, "Why Mike wants to run a marathon," is the subject of the independent clause.)

* Independent clauses are underlined with two lines; dependent clauses are underlined with one line.

** If you want to keep track of complex sentences with noun clauses separately from other types of complex sentences, you can use a different symbol like an "N."

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Examples (cont.)	Explanations (cont.)
Jane wanted to know when she could see her children.	(The dependent clause, "when she could see her children," serves as the direct object of the independent clause.)
Helen will give whoever wins the contest a wonderful prize.	(The dependent clause, "whoever wins the contest," serves as the indirect object of the independent clause.)
One possibility is that he has hidden under the stairs.	(The dependent clause, "that he has hidden under the stairs," serves as the predicate nominative of the independent clause.)
Scott had no idea about what he would say.	(The dependent clause, "what he would say," serves as the object of the preposition "about.")

Note 2: Often students leave out the subordinating the subordinating conjunction "that" when writing complex sentences. If the subordinating conjunction "that" is missing, score the sentence as a complex sentence with an adjective clause or a noun clause and encircle the checkmark. Give feedback to the student regarding this omission. This is the only omission of a word that is acceptable.

Examples	Explanations
Baseball has several rules you have to know.	(In this sentence, the subordinating conjunction "that" has been left out between the words "rules" and "you." ["you have to know" is an adjective clause])
I think soccer is a more active sport.	(In this sentence, the subordinating conjunction "that" has been left out between the words "think" and "soccer." ["soccer is a more active sport" is a noun clause])
Some women feel they deserve more out of life.	(In this sentence, the subordinating conjunction "that" has been left out between the words "feel" and "they." ["they deserve more out of life" is a noun clause])

Complex sentences with more than one dependent clause. A complex sentence can have two or even three dependent clauses. The dependent clauses can be different kinds of dependent clauses or the same kind. A sentence of this type is still scored as a complex sentence. Put a checkmark next to "Complex Sentence" on the ***Sentence Score Sheet.*** The punctuation rules for adjective clauses and adverb clauses also apply here. Put "NP" in the box if the student has not used commas appropriately.

Examples	Explanations
Baseball has several rules that you should know before you begin to play.	(A complex sentence with an independent clause, a restrictive adjective clause, and an adverb clause.)
Before you begin to play baseball, you need to learn some rules from Floyd because he's the expert.	(A complex sentence with an adverb clause, an independent clause, and an adverb clause.)
What Jesse said surprised Jean, who is his mother.	(A noun clause serving as the subject of the independent clause which is followed by a nonrestrictive adjective clause.)

Compound Complex Sentence

A **compound-complex sentence** consists of two or more independent clauses and at least one dependent clause. In order to be scored as a compound-complex sentence, the sentence must be complete (no words left out), logical, and must make sense. Any compound-complex sentence that does not make sense should be scored as a non-sentence (see below). Record "NP" in the box if the sentence has not been punctuated correctly with commas (i.e., if a comma or commas have been left out). If a semicolon has been left out, score the sentence as a run-on sentence.

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Examples*	Explanations
After the party was over, Jean had a headache, so Paul cleaned up the mess.	(A dependent clause followed by two independent clauses.)
Jean had a headache after the party was over, so Paul cleaned up the house.	(An independent clause followed by a dependent clause and an independent clause.)
Jean had a headache, so Paul cleaned up the house after the party was over.	(An independent clause followed by an independent clause and a dependent clause.)
Although it was snowing, Floyd planned to go to the game; Helen wanted to stay home.	(A dependent clause followed by two independent clauses.)
Floyd planned to go to the game even though it was snowing; Helen wanted to stay home.	(An independent clause followed by a dependent clause and an independent clause.)
Helen wanted to stay home; Floyd wanted to go to the game even though it was snowing.	(Two independent clauses followed by a dependent clause.)
Kevin, who had been late many times before, came late to class today; his teacher bawled him out after class was over.	(A nonrestrictive adjective clause imbedded in the first independent clause, another independent clause, and a dependent clause.)
Trin, whose family lives in Thailand, graded tests until her eyes hurt; she may need glasses.	(A nonrestrictive adjective clause imbedded in the first independent clause, an adverb clause, and another independent clause.)
The players who had been invited came to our house after the game was over; they celebrated the win.	(A restrictive adjective clause imbedded in the first independent clause, an adverb clause, and another independent clause.)
How she survived is a mystery to us; while the war was in progress, she had no food or other resources.	(A noun clause imbedded in the first independent clause [as its subject], an adverb clause, and another independent clause.)

Non Sentence

A **non-sentence** is scored when a student has designated one of the following as a sentence: a sentence fragment, a comma splice, a run-on sentence, or an illogical group of words. The definitions for each of these nonsentences appear below.

Sentence fragments. A **sentence fragment** is a part of a sentence that is set off through capitalization and/or punctuation as if it were a whole sentence. A sentence fragment may be missing a subject or a verb or both. It can be an independent clause that starts with a coordinating conjunction, a dependent clause that starts with a subordinating conjunction, or any other part of a sentence that has been set apart as a sentence (e.g., a prepositional phrase).

Examples	Explanations
The cow eating the grass.	(This sentence is missing a helping verb.)
Eats the grass.	(This sentence needs a subject.)
Eating the grass.	(This sentence needs a subject and a helping verb.)

* Independent clauses are underlined with two lines and dependent clauses with one line.

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Examples (cont.)	Explanations (cont.)
And we will come, too.	(This is the second clause of a compound sentence.)
Because she is sick.	(This is a dependent clause that has no connection to an independent clause.)
Not in my wildest dreams.	(This is a sentence fragment consisting mostly of a prepositional phrase.)

Comma splices. A comma splice is a sentence in which two independent clauses are joined by a comma.

Examples	Explanations
Danny was an excellent basketball player, he was recruited by several major universities.	(In this sentence, only a comma separates the two independent clauses; the coordinating conjunction is omitted.)
The wind howled, the rain beat down on the roof.	(In this sentence, only a comma separates the two independent clauses; the coordinating conjunction has been omitted.)

Run-on sentences. A run-on sentence refers to a group of words in which two or more independent clauses are joined without punctuation or conjunctions.

Examples	Explanations
The wind howled the rain beat down.	(This sentence has no punctuation and no conjunction separating the two independent clauses.)
Danny was an excellent player he was recruited by several schools he chose the University of Kansas.	(This sentence has three independent clauses; the semicolons are omitted.)

Illogical/nonsensical sentences. Other groups of words are often designated as sentences but because of poor syntax, words being mixed up, clauses being mixed up or placed inappropriately, or a word being left out, they don't make sense. These should also be scored as non-sentences.

Examples	Explanations
Sally made candied apples; they were delicious before the trick-or-treaters came.	(In this sentence the adverb clause, "before the trick-or-treaters came" modifies the verb "made." Thus, the dependent clause is misplaced, and the sentence does not make sense.)
Jason and Jane went the store.	(In this sentence, the word "to" was left out between the words "went" and "the." Thus, the sentence does not make sense.)
The carpenters worked all day who put in our cabinets.	(The adjective clause, "who put in our cabinets" modifies "carpenters" and should have been placed immediately following "carpenters.")

For two samples of a student's writing and illustrations of how the sentences within those samples should be scored, see the samples on p. 146, the *Example Score Sheets* on p. 147, and the *Scoring Explanation* on pp. 148-149.

CALCULATION PROCEDURES

Refer to the section on the *Example Score Sheet II* (p. 147) for the *Practice Sample* (p. 146) labeled "Calculating the Scores" as you read this section. The procedures for calculating three scores, the Percentage of Complete Sentences, the Percentage of Complicated Sentences, and the Percentage of Complicated Sentences Punctuated Correctly, are as follows.

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Percentage of Complete Sentences

Count the total number of sentences tallied for each sentence type, and record each total in the appropriate box in the column labeled "Totals." On *Example Score Sheet II*, one simple sentence, three compound sentences, four complex sentences, one compound-complex sentence, and no non-sentences were recorded. Add these totals to arrive at the total number of sentence attempts and record this sum in the box labeled "Total Sentence Attempts." On *Example Score Sheet II*, a total of 9 sentence attempts were recorded.

To calculate the Percentage of Complete Sentences, add up the total number of simple, compound, complex, and compound-complex sentences. Put this total in the numerator box on the top of the fraction under the label "Percentage of Complete Sentences." Then put the total number of sentence attempts in the denominator box of the same fraction. Divide the fraction to obtain a percentage score. Write the percentage score on the blank in front of the percentage sign (%).

On *Example Score Sheet II*, a total of 9 simple, compound, complex, and compound-complex sentences were recorded. There were 9 sentence attempts. These numbers were recorded in the appropriate boxes and the calculations carried out (9 was divided by 9 and the answer was multiplied by 100) to obtain a percentage score of 100%. This percentage score is one of the scores graphed on the student's *Progress Chart*. This score must be 100% for the student to reach mastery.

Percentage of Complicated Sentences

To calculate the Percentage of Complicated Sentences, add up the total number of compound, complex, and compound-complex sentences. Place this total in the numerator box on the top of the fraction under the label "Percentage of Complicated Sentences." Put the total number of sentence attempts in the denominator box of the same fraction. Divide the denominator into the numerator and multiply by 100 to obtain a percentage score. Write the percentage score on the blank in front of the percentage sign (%).

On *Example Score Sheet II*, a total of 8 compound, complex, and compound-complex sentences were recorded. There were 9 sentence attempts. These numbers were recorded in the appropriate boxes, and the calculations were carried out (8 was divided by 9 and the answer was multiplied by 100) to obtain a percentage score of 89%. This percentage score is one of the scores graphed on the student's *Progress Chart*. This score must equal or exceed 33% for the student to reach mastery after instruction in compound sentences, and must equal or exceed 50% for the student to reach mastery after instruction in complex and compound-complex sentences.

Percentage of Complicated Sentences Punctuated Correctly

To calculate the Percentage of Complicated Sentences Punctuated Correctly, count the total number of compound, complex, and compound-complex sentences for which "NP" is *not* recorded in the box along with the checkmark. Place this total in the numerator box of the fraction under the label "Percentage of Complicated Sentences Punctuated Correctly." Put the total number of compound, complex, and compound-complex sentences in the denominator box of the same fraction. Divide the fraction to obtain a percentage score. Write the percentage score on the blank in front of the percentage sign.

On *Example Score Sheet II*, 7 compound, complex, and compound-complex sentences were punctuated correctly. A total of 8 compound, complex, and compound-complex sentences were recorded. These numbers were entered in the appropriate boxes and the calculations were carried out (7 was divided by 8 and the answer was multiplied by 100) to obtain a percentage score of 87%. This percentage score is one of the scores graphed on the student's *Progress Chart*. This score must equal or exceed 66% for the student to reach mastery after instruction in compound, complex, and/or compound-complex sentences.

PROGRESS CHART EXPLANATION

Eight progress charts must be completed: one for each of the four sentence types and one for each set of generalization activities. Plot on each of the sentence *Progress Charts* the student's scores on: the pretest, the written quiz, controlled practice attempts, and advanced practice attempts. For example, the data from both *Example Sentence Score Sheets* (p. 147) are plotted on the *Example Progress Chart* (p. 145). The student, Kathy, earned the following percentage scores on the pretest: 25% complete sentences, 0% complicated sentences, and 0% correctly punctuated complicated sentences. The 25% is plotted on the vertical line above the label "Pretest" with a dot. The 0% for complicated sentences is plotted on the same vertical line with a star. The 0% for correctly punctuated complicated sentences is plotted on the same vertical line with a square.

Kathy earned the following scores on Compound-Complex Sentence Lesson 7B: 100% complete sentences, 89% complicated sentences, and 87% correctly punctuated complicated sentences. The 100% is plotted on the vertical line above 7B with a dot. The 89% is plotted on the same vertical line with a star; and the 87% is plotted on the same vertical line with a square. Scores from consecutive practice attempts within the same lesson series should be connected as shown in the *Example Progress Chart*.

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SENTENCE SCORE SHEET

Student Name: _____ Pretest/Posttest: _____

Date: _____ Practice: _____

Sentence Type	Line Number 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Totals
Simple																
Compound																
Complex																
Compound-Complex																
Non-Sentence																
															Total Sentence Attempts →	

Calculating the Scores

Percentage of Complete Sentences

$$\frac{\text{No. Simple + Comp. + Complex + Comp./Complex}}{\text{Total No. Sentence Attempts}} = \frac{\square}{\square} \times 100 = \frac{\quad}{\text{Mastery = 100\%}}\%$$

Percentage of Complicated Sentences

$$\frac{\text{No. Comp. + Complex + Comp./Complex}}{\text{Total No. Sentence Attempts}} = \frac{\square}{\square} \times 100 = \frac{\quad}{\text{Mastery = 33\%, 40\%, or 50\%}}\%$$

(see criterion for each part)

Percentage of Complicated Sentences Punctuated correctly

$$\frac{\text{No. Comp. + Complex + Comp./Complex Punc. Corr.}}{\text{Total No. Sentence Attempts}} = \frac{\square}{\square} \times 100 = \frac{\quad}{\text{Mastery = at least 66\%}}\%$$

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APPENDIX A: EVALUATION GUIDELINES

PARAGRAPH SCORING INSTRUCTIONS

General Scoring Guidelines

Each product will consist of one or more sentences written on a piece of paper. Review the product carefully to score each sentence and other aspects of the paragraph. The evaluation process for a product containing six sentences should take no more than 5-10 minutes once you understand the scoring process and the definitions. Although scoring the products yourself is optimal so that you can give appropriate feedback to students, you may train a paraprofessional or volunteer to do the scoring. If so, be sure to spend adequate time training the person to score products. Have the person read these instructions. Then have the person score a paragraph, receive feedback from you, score another paragraph, receive feedback from you, and so forth, until the person's scoring agrees closely with yours (there should be agreement on 90% or more of the items) on two or three consecutive paragraphs. Be sure to have the person practice on several different paragraphs, with some paragraphs representing pre-instructional efforts and others representing practice attempts. Thereafter, check the person's scoring periodically to determine whether he/she continues to apply the scoring guidelines appropriately.

Regardless of who scores the product, the same five-step procedure is to be used. Refer to the *Student Samples* (p. 258), the *Scoring Explanation* (pp. 260-262) and the *Example Paragraph Score Sheets* (p. 259) for examples of how this procedure is applied.

1. **Number the lines of writing.** In the left-hand margin of the student's paper, place a number next to each line of writing. Place the #1 on the line on which the first sentence begins, the #2 on the next line, and so forth. These line numbers will help you give quick and efficient feedback to your students. In addition, they will allow you to quickly match up your scores with another person's scores for the same paragraph.

2. **Read the whole paragraph.** To get a general idea of the meaning of the paragraph and to determine the type of paragraph that has been written (if any), read the whole paragraph. Refer to the *Model Paragraphs* (pp. 361-369) and to ***Cue Cards #62-74*** if you need help determining the type of paragraph that has been written.

3. **Determine where a sentence begins and ends.** The beginning of a sentence can be designated through the use of: (a) a capital letter as the first letter of the first word of the sentence, (b) an end punctuation mark after the last word of the previous sentence, or (c) both punctuation and capitalization. The end of a sentence can be designated through the use of (a) end punctuation after the last word of the sentence, (b) a capital letter of the first letter of the first word of the next sentence, or (c) both punctuation and capitalization. ***Whatever appears on the paper is evaluated as it stands.*** For example, if a period appears to be located in what you would think should be the middle of a sentence, treat it as an end punctuation mark, and evaluate the words in front of the period as if they were supposed to be a sentence. Never second-guess the student.

4. **Score the sentence.** Once you have determined where a sentence begins and ends, score it by following the ***Guidelines for Scoring the Sentences*** presented below, by applying the requirements for particular types of paragraphs (see ***Cue Cards #62-74***), and by using the ***Paragraph Score Sheet***. Record the line number which corresponds to the line on which the sentence starts in the box to the right of the label, "Line number," and over the box in which you will place the point value that you are awarding for the sentence.

5. **Repeat steps #3 and 4 for each sentence.** Each sentence in a paragraph should receive a point score on the *Paragraph Score Sheet*.

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6. **Score the other aspects of the paragraph.** Using the ***Guidelines for Scoring Other Aspects of the Paragraph*** presented below, score the transitions, the consistency of point of view, the consistency of tense, the title of the paragraph, the format of the paragraph, and the use of a variety of sentences in the paragraph. Record the scores in the boxes on the *Paragraph Score Sheet* that correspond to the appropriate item.

Guidelines for Scoring the Sentences

Evaluate the Topic Sentence

The Topic Sentence is defined here as the first sentence of the paragraph. Sometimes, a student uses two sentences to introduce the main idea of the paragraph. If so, the first two sentences are treated as if they were one Topic Sentence. Only one score is given for the two sentences. Put the score for the Topic Sentence(s) in the box below the label, "Topic Sentence," and to the right of the label, "For Sentences," on the *Paragraph Score Sheet*. Evaluate the Topic Sentence as follows:

a. **Score 8 points if:**
   - the first statement is appropriate to the topic/assignment;
   - and it fulfills the requirements for the Topic Sentence of the type of paragraph required by the topic/assignment (See ***Cue Cards #62-74***);
   - and it names the topic;
   - and it specifies the exact details the paragraph covers in the order in which they will be covered (i.e., it fulfills the requirements for a Specific Topic Sentence);
     or it summarizes the details which will be mentioned (i.e., it fulfills the requirements for a Clueing Topic Sentence);
     or it grabs the reader's attention (i.e., it fulfills the requirements for a very good General Topic Sentence);
   - and it is a complete sentence that makes sense.

   Examples:

   (1.) **Assignment:** Explain the rules for one game.

   Topic Sentence: In Scrabble, there are rules explaining what words can be used, where words can be placed, and how words are scored. *(Score 8 pts; it is appropriate for the assignment and the type of paragraph required, names the topic [rules for Scrabble], specifies the details, and is a complete sentence.)*

   (2.) **Assignment:** Compare and contrast two sports.

   Topic Sentence: The games of soccer and football have many differences and similarities. *(Score 8 pts; it is appropriate for the assignment, names the topic [soccer and football], summarizes the details that will be covered using clue words, and is a complete sentence.)*

   (3.) **Assignment:** Give directions for doing something.

   Topic Sentence: Driving to my uncle's house can be a harrowing trip; thus, following his weird directions is mandatory. *(Score 8 pts; it is appropriate for the assignment and the type of paragraph required, names the topic [directions to the writer's uncle's house], grabs the reader's attention, and is a complete sentence.)*

   (4.) **Assignment:** Tell about a vacation you've had.

   Topic Sentence: During our last trip to the mountains, several unusual things happened to us, beginning with a fall into the White River and ending with a flat tire a block from our house. *(Score 8 pts; it is appropriate to the assignment and the type of paragraph required, names the topic [a trip], specifies the details at both ends of the trip, and is a complete sentence.)*

   (5.) **Assignment:** Tell how men and women's roles are changing.

   Topic Sentence: The women's liberation movement and economic pressures have helped bring about some exciting changes in roles for men and women. *(Score 8 pts.; it is appropriate for the assignment and the type of paragraph required, names the topic [changes in roles for men and women], summarizes the details through the use of a clue word, and is a complete sentence.)*

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(6.) **Assignment:** Describe someone.

Topic Sentence: My mother is a classy lady. *(Score 8 pts.; it is appropriate for the assignment and the type of paragraph required, names the topic [mother], grabs the reader, and is a complete sentence.)*

b. **Score 4 points if:**

- the sentence is appropriate to the paragraph topic/assignment;
- and it fulfills the requirements for the Topic Sentence of the type of paragraph required by the topic/assignment (See ***Cue Cards #62-74***);
- and it names the paragraph topic (i.e., fulfills the naming requirement for a General Topic Sentence);
- and it is a complete sentence that makes sense.

(Thus, 4 points are to be awarded when the student writes a General Topic Sentence that does not grab the reader.)

Examples:

(1.) **Assignment:** Write about a book you read.

Topic Sentence: *Soccer Halfback* by Matt Christopher is a fiction story. *(Score 4 pts.; it is appropriate to the topic and the type of paragraph required; names the topic, and is a complete sentence. It does not grab the reader's attention.)*

(2.) **Assignment:** Write directions about how to do something.

Topic Sentence: The directions for getting to my uncle's house are as follows. *(Score 4 pts.; it is appropriate for the assignment and the type of paragraph required, names the topic, and is a complete sentence. It does not grab the reader's attention.)*

c. **Score O points if:**

- the first statement in the paragraph is not relevant to the assignment;
- or it does not fulfill the requirements for a Topic Sentence for the type of paragraph required;
- or it does not mention the topic/main idea of the paragraph;
- or it does not belong to the rest of the paragraph at all;
- or it is a Detail Sentence (i.e., discusses one of the details);
- or it is a Specific Topic Sentence in which the sequence of the details does not match the sequence of the details in the rest of the paragraph;
- or it is an incomplete or run-on sentence or a sentence that does not make sense.

Examples:

(1.) **Assignment:** Give directions for building a snowman.

Topic Sentence: A snowman melts fast. *(Score O pts.; although it is about a snowman, it is not relevant to the assignment, nor does it fulfill the requirements of a Topic Sentence for a Step-by-step Paragraph [i.e., that a particular sequence of steps will be described].)*

Topic Sentence: This is an easy job. *(Score O pts.; the topic is not named.)*

Topic Sentence: It is cold in the winter time. *(Score O pts.; this sentence does not belong in a paragraph about building a snowman.)*

Topic Sentence: First, you have to make the head by rolling a snowball around in the snow until it is the size of a basketball. *(Score O pts.; this sentence is a Detail Sentence for a paragraph about building a snowman.)*

Topic Sentence: Building a snowman several steps. *(Score O pts.; this is an incomplete sentence.)*

Evaluate the Detail Sentences

The next sentences you will evaluate are the sentences located between the first sentence and the final sentence of the paragraph. Evaluate them ***as if an appropriate Topic Sentence has been written.*** (That is, pretend that an appropriate Topic Sentence has been written for the paragraph.) For each sentence (which

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is what the student indicates to be a sentence), write the number of the line on which the sentence starts in the box to the right of the label "Line Number" in the Detail Sentences Section of the *Paragraph Score Sheet.* Write the appropriate score for the sentence in the box below the line number and to the right of the label, "For Sentences." Start with the ***second sentence*** of the paragraph unless two sentences were used to introduce the topic. In the latter case, start with the third sentence of the paragraph. Evaluate each sentence separately and in sequence. ***Do not evaluate the last sentence of the paragraph.*** Evaluate each Detail Sentence as follows:

a. **Score 2 points if:**

- the sentence mentions a detail that is relevant to the topic;
- and it fulfills the requirements for a Detail Sentence for the type of paragraph required;
- and it logically follows the information presented in other sentences;
- and it is a complete sentence that makes sense.

Examples:

Topic Sentence: Human waste is the most prevalent cause of pollution.

Detail Sentences: One kind of human waste is litter. *(Score 2 pts.; the detail is relevant to the topic, fulfills the requirements for a Detail Sentence for a Facts Paragraph, logically follows the Topic Sentence, and is a complete and meaningful sentence.)* Another kind is garbage *(Score 2 pts.)* A third kind of human waste is sewage *(Score 2 pts.)* These three kinds of human waste are a problem because, if they are not handled right, they can damage the way our land looks and produces in the future. *(Score 2 pts.)*

b. **Score 0 points if:**

- the sentence fails to mention a detail relevant to the topic;
- or it does not fulfill the requirements for a Detail Sentence for the type of paragraph required;
- or it repeats a detail already mentioned;
- or it is not in logical sequence with previously presented information;
- or it has incomprehensible literal meaning within the structure of the paragraph;
- or it is an incomplete or run-on sentence.

Examples:

Topic sentence: Pollution is caused by factories.

Detail sentences: Factories send a lot of chemicals into the air through their smokestacks. *(Score 2 pts.; this sentence covers a relevant detail, it fulfills the requirements for a Detail Sentence in a Facts Paragraph, it logically follows the Topic Sentence, and it is complete and meaningful.)* I think smokestacks should be banned. *(Score 0 pts.; this sentence does not provide information about a fact, which is required in a Facts Paragraph.)* Smokestacks are tall. *(Score 0 pts.; the information is not relevant to the topic.)* Smokestacks cause pollution with their smoke. *(Score 0 pts., the sentence repeats information provided in the first Detail Sentence.)* Factories are full. *(Score 0 pts.; the sentence has incomprehensible literal meaning within the context of the paragraph.)* Smokestacks green smoke into the stratosphere and break down the ozone layer. *(Score 0 pts.; this is an incomplete sentence.)*

Evaluate the Clincher Sentence

The last sentence of the paragraph is to be evaluated as the Clincher Sentence. Place the score in the box under the label "Clincher Sentence." Evaluate the Clincher Sentence as follows.

a. **Score 8 points if:**

- the last statement is appropriate to the topic/assignment;
- and it fulfills the requirements for a Clincher Sentence for the type of paragraph required;
- and it names the topic of the paragraph;
- and it specifies the exact details the paragraph covered in the order in which they were covered (i.e., it fulfills the requirements for a Specific Clincher Sentence);
  or it summarizes the details which were covered in the paragraph (i.e., it fulfills the requirements for a Clueing Clincher Sentence);
  or it makes the reader think more about the topic (i.e., it fulfills the requirements for a very good General Clincher Sentence);

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- and it gracefully closes the paragraph;
- and it is distinctly different from the Topic Sentence (i.e., it is a different type of sentence from the Topic Sentence [e.g., if the Topic Sentence is a General Topic Sentence, the Clincher Sentence must be either a Clueing Clincher Sentence or a Specific Clincher Sentence] and different words are used);
- and it is a complete sentence that makes sense.

Examples:

(1.) **Topic sentence:** You must follow a sequence of steps to build a snowman, beginning with the base and ending with the decorations.

Clincher Sentence: As you can see, building a snowman is pretty easy if you follow these eight steps in the right order. *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic, summarizes the details, gracefully closes the paragraph, is distinctly different from the Topic Sentence (i.e., it is a Clueing Clincher Sentence, and the Topic Sentence is a Specific Topic Sentence), and is a complete and meaningful sentence).*

Clincher Sentence: The end result of this process, a smiling snowman, can greet visitors to your yard and home for several days. *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic [snowman], makes the reader think more about the topic, gracefully closes the paragraph, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

(2.) **Topic Sentence:** Several unusual things happened to us on our summer vacation.

Clincher Sentence: In conclusion, our trip was filled with accidents, near disasters, and one loss. *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic [trip], specifies the details that were covered in the order they were covered, gracefully closes the paragraph, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

Clincher Sentence: To summarize, our summer vacation was so unusual that few people would want to try to duplicate it; how about you? *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic [vacation], makes the reader think more about the topic, gracefully closes the paragraph, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

(3.) **Topic Sentence:** The causes of pollution include human waste, industrial waste, and vehicle exhaust.

Clincher Sentence: Thus, each person has a responsibility to clean up pollution where he lives and where he works. *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic [causes of pollution], makes the reader think more about the topic, gracefully closes the paragraph, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

Clincher Sentence: In conclusion, these three causes of pollution must be controlled if our earth is to be saved. *(Score 8 pts.; it is appropriate to the topic and the type of paragraph, names the topic [causes of pollution], summarizes the details covered, gracefully closes the paragraph, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

b. Score 4 points if:

- the last sentence is appropriate to the topic/assignment;
- and it fulfills the requirements for a Clincher Sentence for the type of paragraph required by the topic/assignment;
- and it names the topic of the paragraph (i.e., it fulfills the naming requirement for a General Clincher Sentence);
- and it gracefully closes the paragraph;
- and it is distinctly different from the Topic Sentence in form and wording;
- and it is a complete sentence that makes sense.

(Thus, 4 points are to be awarded when the student writes a General Clincher Sentence that is distinctly different from the Topic Sentence in form and wording but does not induce the reader to think more about the topic.)

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Examples:

(1.) **Topic Sentence:** *Rookies*, a book by Mark Freeman, includes plenty of action, suspense, and adventure.

Clincher Sentence: To conclude, *Rookies* is a good book. *(Score 4 pts.; it is appropriate to the topic and the type of paragraph, names the topic, closes the paragraph gracefully, is distinctly different from the Topic Sentence; and is a complete and meaningful sentence.)*

(2.) **Topic Sentence:** Baking a cake requires many skills.

Clincher Sentence: In sum, baking a cake can be a skillful activity. *(Score 4 pts. it is appropriate to the topic and the type of paragraph, names the topic, closes the paragraph gracefully, is distinctly different from the Topic Sentence, and is a complete and meaningful sentence.)*

c. Score 0 points if:

- the last sentence of the paragraph is not relevant to the topic and the information covered in the paragraph;
- or it does not fulfill the requirements for a Clincher Sentence for the type of paragraph required;
- or it does not name the topic or main idea of the paragraph;
- or it does not gracefully close the paragraph;
- or it is a Detail Sentence;
- or it is the same as or very similar to the Topic Sentence in form or wording (e.g., the student has written a Clueing Topic Sentence and a Clueing Clincher Sentence);
- or it is a Specific Clincher Sentence in which the sequence of the details does not match the sequence of the details in the rest of the paragraph;
- or it is an incomplete or run-on sentence or a sentence that does not make sense.

Examples:

Topic Sentence: There are five steps for building a snowman.

Clincher Sentence: In summary, building a snowman is cold work. *(Score 0 pts.; this sentence is not relevant to the steps of building a snowman, and it does not indicate that the job is done.)*

Clincher Sentence: To conclude, this is fun. *(Score 0 pts.; the topic/main idea has not been named.)*

Clincher Sentence: Building a snowman is a job. *(Score 0 pts.; this sentence does not gracefully close the paragraph.)*

Clincher Sentence: Finally, put in the eyes, nose, and mouth. *(Score 0 pts.; this is a Detail Sentence.)*

Clincher Sentence: Thus, these are the five steps for building a snowman. *(Score 0 pts.; this is similar to the Topic Sentence.)*

Clincher Sentence: Building a snowman fun. *(Score 0 pts.; this is an incomplete sentence.)*

Guidelines for Scoring Other Aspects of the Paragraph

Evaluate the Transitions

Transitions are defined here as words or phrases that are used to connect one or more sentences to sentences that precede them. They are words or phrases that illuminate the relationships of the ideas being discussed. Examples of transitions are: "First," "Second," "Another," "More important," and "Next." (See the *Transitions Chart* for more examples). Place the transition score in the box to the right of the label, "For Transitions," and under the appropriate sentence score when a transition is present in the sentence. Transitions are scored in Detail Sentences and in the Clincher Sentence only. Evaluate the transitions as follows.

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a. **Score 2 points if:**

- an appropriate transition word or phrase occurs in the sentence;*
- and the transition is appropriate to the logic and meaning of the paragraph;
- and the transition is appropriate within the sequence of the other transitions used in the paragraph;
- and appropriate punctuation is used in conjunction with the transition as needed.

Examples:

(1.) **Topic sentence:** One can see four types of clouds in the sky.

Transitions:

One type of cloud is . . . *(Score 2 pts.)*

Another kind of cloud is . . . *(Score 2 pts.)*

A third type of cloud is . . . *(Score 2 pts.)*

A final kind of cloud is . . . *(Score 2 pts.)*

In conclusion, . . . *(Score 2 pts.)*

(2.) **Topic Sentence:** The Civil War was caused by three events.

Transitions:

The first cause of . . . *(Score 2 pts.)*

The second event that caused . . . *(Score 2 pts.)*

The last cause . . . *(Score 2 pts.)*

To summarize, . . . *(Score 2 pts.)*

b. **Score 0 points if:**

- no transition word or phrase occurs in the sentence and the sentence introduces a new detail or concludes the paragraph;
- or if the transition is not appropriate to the logical order or meaning of the sentences in the paragraph;
- or if the transition is not appropriate to the sequence of the other transitions in the paragraph;
- or if appropriate punctuation has not been used in conjunction with the transition.

Examples:

Topic Sentence: The Civil War was caused by three events.

Transitions:

The first cause . . . *(Score 1 point; this is an appropriate beginning transition.)*

A right cause . . . *(Score 0 pts.; this transition is inappropriate for the chain-link sequence and logic.)*

Otherwise, . . . *(Score 0 pts.; this transition is inappropriate for the sequence of transitions that was begun.)*

In conclusion this is the . . . *(Score 0 pts., a comma should have followed the word, "conclusion.")*

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* For the most part, transitions will occur at the beginning of a sentence. Occasionally, you will see a transition used in the middle of a sentence. For example, the word, "nevertheless," might be used as a conjunctive adverb in a Compound Sentence after a semicolon. (See p. 130 in the *Sentence Writing Strategy*.) You may award 2 points of credit for these transitions if they are appropriately used and punctuated. Typically, the coordinating conjunctions, "and," "but," "for," "so," "yet," "nor," and "or," should not receive credit as transitions unless they are specifically used in an appropriate way to introduce a new detail. Subordinating conjunctions used at the beginning of a Lead-Off Sentence to introduce a new detail should receive 2 points of credit. Subordinating conjunctions used in the middle of a sentence or at the beginning of a Follow-Up Sentence should receive no credit.

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Evaluate the Point of View

Read all the sentences in the paragraph and determine whether all the sentences* were written using the same point of view. If they are written from the same point of view, place 4 points on the *Paragraph Score Sheet* in the box labelled "Point of View." If even one sentence is written from a different point of view from the others, place a "0" in the box.

Point of View

First Person	I, we
Second Person	you, (understood you)
Third Person	he, she, they, it

Evaluate the Tense

Read all the sentences in the paragraph, and determine whether every sentence was written using the same tense. If all of the sentences are written in the same tense, place 4 points in the box labelled "Tense" on the *Paragraph Score Sheet.* If even one sentence is written in a different tense than the others, place a "0" in the box.

Tenses

Present	is painting, paints
Past	was painting, painted
Future	will paint, shall paint

Evaluate the Title

Look for a title at the top of the page. Place the score in the box labelled "Title" on the *Paragraph Score Sheet.* Evaluate the title as follows.

a. **Score 2 points if:**
   - a title is present;
   - and if the first word of the title and words composed of more than three letters in the remainder of the title are capitalized;
   - and if the title fits the information in the paragraph;
   - and if the title is set apart from the rest of the paragraph through some means (e.g., centering, spacing, and/or underlining);
   - and if the title grabs the reader's interest.

b. **Score 1 point if:**
   - a title is present;
   - and if the first word of the title and words composed of more than three letters in the remainder of the title are capitalized;
   - and if the title fits the information in the paragraph;
   - and if the title is set apart from the rest of the paragraph through some means (e.g., centering, spacing, and/or underlining).

c. **Score 0 points if:**
   - a title is not present;
   - or the appropriate words in the title are not capitalized;
   - or the title is not relevant to the information in the paragraph;
   - or the title is not set apart from the rest of the paragraph through some means (e.g., centering, spacing, and/or underlining).

---

* Occasionally, you will find a clause that is written from a different point of view than the rest of the paragraph. For example, a student might write a paragraph in the third person point of view and use the Concluding Transition, "As you can see," (which is in the second person point of view). Use your judgment in these situations. If the use of the inconsistent point of view makes sense within the context of the paragraph and happens infrequently, you may decide to award full credit.

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Evaluate the Format of the Paragraph

Determine whether the first word of the paragraph is indented appropriately and the other lines of writing begin at the left margin. If the first word is indented approximately five letter spaces and the other lines begin no more than one letter space away from the margin on the paper, place 2 points in the box labelled "Format" on the *Paragraph Score Sheet*. If any of these requirements are not met, place a "0" in the box.

Evaluate the Sentence Variety

Determine how many different kinds of sentences (Simple, Compound, Complex, or Compound-Complex) the student has used in the paragraph and has punctuated correctly. If he/she has used at least three of the four types of sentences and they have been punctuated correctly, award the student 6 points. Four points can be awarded for correct use of only two sentence types. Place the points in the box labelled "Sentence Variety" on the *Paragraph Score Sheet*. If the student has used only one sentence type or has used several sentence types with incorrect punctuation, place a "0" in the box.

CALCULATION PROCEDURES

There are two scores to be calculated for each paragraph: the Mastery Score and the Bonus Score. Refer to the sections on the *Paragraph Score Sheet* (p. 343) labelled "Mastery Score" and "Bonus Score" as you read this section. Refer to the *Scoring Explanation* (pp. 260-262) and the *Example Paragraph Score Sheets* (p. 259) for examples of how to calculate the scores.

Calculating the Mastery Score

The Mastery Score is the score that students earn on their basic paragraph for mastery of the *Paragraph Writing Strategy*. The basic paragraph is defined as a Topic Sentence, four Detail Sentences, and a Clincher Sentence. In order to reach mastery on this basic paragraph, a student must earn at least 45 of the 50 available points (i.e., at least 90% of the available points). In order for students to earn this many points, their paragraphs must contain at least a Topic Sentence, three Lead-Off Detail Sentences complete with appropriate transitions, at least one other Detail Sentence (i.e., another Lead-Off Sentence or a Follow-Up Sentence), and a Clincher Sentence which contains a Concluding Transition. Also, other requirements for a well-organized paragraph must be fulfilled (e.g., a title must be present, point of view and tense must be consistent, the paragraph format must be appropriate, and a variety of sentences must be used). The steps for calculating the Mastery Score are as follows.

1. Total the number of points the student has earned for the Topic Sentence, the **first four Detail Sentences** that appear in the paragraph, and the Clincher Sentence. Place this total score in the box on the *Paragraph Score Sheet* labeled "Sentence points for basic paragraph (T+4D+C)." This total should not exceed 24 points.
2. Total the number of points the student has earned for the **first three** transitions that appear in the Detail Sentences and for the transition that appears as a Concluding Transition in the Clincher Sentence of the paragraph. Place this total score in the box on the *Paragraph Score Sheet* labeled "Transition points for basic paragraph (3T + 1CT)." This total score for transitions should not exceed 8 points.
3. Total the scores in the seven boxes containing the Sentence points, Transition points, Point of view points, Tense points, Title points, Format points, and Sentence variety points. Place this total score in the box labeled "Mastery Score." The Mastery Score should not exceed 50 points.
4. Multiply the number of points in the "Mastery Score" box by 2 to calculate the percentage of points earned. Place the percentage of points in the box labeled "Mastery Percentage." This percentage score is the score to be plotted on the student's *Whole Paragraphs Progress Chart* or *Generalization Progress Chart*.

Calculating the Bonus Score

The Bonus Score is the score that students earn on the whole paragraph that they have written. This score was designed to enable you to give students credit for sentences they have written beyond the sentences required for the basic paragraph. The steps for calculating the Bonus Score are as follows.

1. Total the number of points earned for the Detail Sentences the student has written beyond the first four Detail Sentences. For example, if the student has earned points for six Detail Sentences, total the number of points earned for the fifth and sixth Detail Sentences. Place this total score in the box labeled "Points for extra appropriate Detail Sentences."

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2. Total the number of points earned for the transitions the student has used in Detail Sentences beyond the first three transitions. For example, if the student has earned points for six transitions in the Detail Sentences, total the number of points earned for the fourth, fifth, and sixth Transitions. Place this total score in the box labeled "Points for extra appropriate Transitions."
3. Place the Mastery Score in the box labeled "Mastery Score."
4. Total the Points for extra appropriate Detail Sentences, the Points for extra appropriate transitions, and the Mastery Score. Place this score in the box labeled "Bonus Score." Refer to this score as you give feedback to the student. If you wish, you can construct a progress chart based on raw points earned that students can use for recording their Bonus Scores.

SCORING INSTRUCTIONS FOR CONTROLLED PRACTICE LESSONS

Refer to the *Answer Keys* on pages 107-132 in the *Student Lessons Volume* to score the *Controlled Practice Lessons*. Total the number of points earned on the lesson, and record this total score in the box labeled "Total" at the bottom of the lesson sheet. Use the *Percentage Chart* on page 132 of the *Student Lessons Volume* to help you determine the percentage score that corresponds to the total number of points earned on the lesson. Have the student record this percentage score on the *Progress Chart for Parts I, II, and III.*

PROGRESS CHART EXPLANATION

There are three progress charts. The *Progress Chart For Parts I, II, and III* is to be used to record students' scores on *Controlled Practice Lessons*. The *Whole Paragraph Progress Chart* is to be used to record students' scores on pretests, posttests, and advanced practice attempts. The *Generalization Progress Chart* is to be used to record students' scores on paragraphs written for Activation and Maintenance activities. Once a percentage score has been determined, it should be plotted as a dot on the appropriate progress chart on the point of intersection between the horizontal line that corresponds to the percentage score and the vertical line that corresponds to the lesson or assignment number. For example, on the *Example Paragraph Writing Progress Chart for Parts I, II, and III* (p. 257), Chris earned percentage scores of 60% on *Topic Sentences Lesson 1A*, 87% on *Topic Sentences Lesson 1B*, 40% on *Topic Sentences Lesson 2A*, 70% on *Topic Sentences Lesson 2B*, and 90% on *Topic Sentences Lesson 2C*. These percentages have been recorded on the *Example Paragraph Writing Progress Chart for Parts I, II, and III* as dots, and the dots related to a particular lesson series have been connected with lines.

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PARAGRAPH SCORE SHEET

Student Name: _____
Date: _____
Paragraph Topic: _____

Pretest: _____
Sequential: _____
Descriptive: _____
Expository: _____
Compare & Contrast: _____
Posttest: _____
Generalization: _____

	Topic Sentence	Detail Sentences												Clincher Sentence
Line Numbers														
Points Earned → For Sentences														
Points Earned → For Transitions														

Mastery Score:

Sentence points for basic paragraph (T+4D+C)		Transition points for basic paragraph (3T & 1CT)		Point of view points		Tense points		Title points		Format points		Sentence variety points		Mastery Score
	+		+		+		+		+		+		=	
(24)		(8)		(4)		(4)		(2)		(2)		(6)		(50)

(Mastery score x2)

Bonus Score:

Points for extra appropriate Detail Sentences		Points for extra appropriate Transitions		Mastery Score		Bonus Score
	+		+		=	

COMMENTS:

Mastery Percentage

_____ %

(Mastery= 90% or above)

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Scoring Procedures for Error Monitoring Strategy

APPENDIX A: EVALUATION GUIDELINES

Scoring Instructions for Written Products

Scoring Steps

Each product should consist of six or more sentences written on a sheet of paper (or journal page). Review each product carefully to score errors. The evaluation process for a product containing six sentences should take no more than 4-5 minutes once you understand the scoring process and the relevant error definitions.

You may train a paraprofessional or volunteer to do the scoring. If so, train the person as you were trained to score the products. Have the person read these instructions. Then have the person score the product, receive feedback from you, score another product, receive feedback from you, and so forth, until the person's scoring agrees closely with yours on two or three consecutive products. Thereafter, check the person's scoring periodically to determine whether he continues to apply the definitions appropriately.

Regardless of who scores the product, the same four-step procedure is used.

1. **Number the lines of writing.** In the left-hand margin of the student's paper, place a number next to each line of writing. Place the 1 on the line on which the first sentence begins, the 2 on the next line, and so forth. These line numbers will help you give quick and efficient feedback to your students. They will also allow you to quickly match up your scores with another person's scores when you are training somebody else to be a scorer.
2. **Read a sentence and determine if any errors are present.** A sentence is any group of words designated by beginning capitalization, end punctuation, or both. ***Whatever appears on the paper is evaluated as it stands.*** Do not second-guess the student. Read a sentence and determine whether an error is present. Refer to the definitions of errors below.
3. **Record the error on the *Error Monitoring Score Sheet.*** Place a tally mark in the box under the line number on which the error occurs *and* next to the correct error category. (Refer to the error definitions below to determine the correct category, if necessary.) For example, if a margin error appears on line 4 of the product, place a tally mark in the box that appears under the number 4 and next to the label "Overall appearance."
4. **Repeat steps 1 - 3 for each sentence.**

Error Definitions

The definitions for each type of error are as follows.

Sentence Errors

A *sentence error* is scored when a student designates one of the following as a sentence: a sentence fragment, a run-on sentence, or an illogical group of words. For any sentence error, place your tally mark in the box under the line number corresponding to the line on which the first word of the sentence appears and next to the label "Sentence error." The definition for each type of non-sentence appears below.

Sentence fragments. A *sentence fragment* is a part of a sentence that is set off through capitalization and/or punctuation as if it were a whole sentence. A sentence fragment may be missing a subject or a verb or both. It can be an independent clause that starts with a coordinating conjunction, a dependent clause that starts with a subordinating conjunction, or any other part of a sentence that has been set apart as a sentence (e.g., a prepositional phrase).

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Examples	*Explanations*
The cow eating the grass.	(This sentence is missing a helping verb.)
Eats the grass.	(This sentence needs a subject.)
Eating the grass.	(This sentence needs a subject and a helping verb.)
And we will come, too.	(This is the second clause of a compound sentence.)
Because she is sick.	(This is a dependent clause that has no connection to an independent clause.)
Not in my wildest dreams.	(This is a sentence fragment consisting mostly of a prepositional phrase.)

Run-on sentences. A ***run-on sentence*** refers to a group of words in which two or more independent clauses are joined without punctuation or conjunctions.

Examples	*Explanations*
The wind howled the rain beat down.	(This sentence has no punctuation and no conjunction separating the two independent clauses.)
Danny was an excellent player he was recruited by several schools he chose the University of Kansas.	(This sentence has three independent clauses; the semicolons are omitted.)

Illogical/nonsensical sentences. Other groups of words are often designated as sentences, but because of poor syntax, words being mixed up, clauses being mixed up or placed inappropriately, or a word being left out, they don't make sense. These should also be scored as non-sentences.

Examples	*Explanations*
Sally made candied apples; they were delicious before the trick-or-treaters came.	(In this sentence, the adverb clause, "before the trick-or-treaters came," modifies the verb "made." Thus, the dependent clause is misplaced, and the sentence does not make sense.)
Jason and Jane went the store.	(In this sentence, the word "to" was left out between the words "went" and "the." Thus, the sentence does not make sense.)
The carpenters worked all day who put in our cabinets.	(The adjective clause, "who put in our cabinets," modifies "carpenters" and should have been placed immediately following "carpenters.")

Paragraph Errors

A ***paragraph error*** is scored if the student makes any of the following errors. (Note: Only the first type of error, the relationship error, is scored for students who have not received instruction in the *Paragraph Writing Strategy*.)

Relationship error. If a sentence does not directly relate to the topic of the paragraph, it should be scored as an error. Place your tally mark in the box under the line number of the line on which the first word of the sentence appears.

Point-of-view error. A ***point-of-view error*** can occur if the student uses a point of view in one sentence that differs from the point of view used in the majority of sentences in the paragraph. For example, the paragraph may start with three sentences written from the first-person point of view, while the fourth sentence may be written from the second-person point of view. The fourth sentence is in error.* Place your tally mark in the box under the line number corresponding to the line on which the point of view is first expressed in the sentence.

Tense error. A ***tense error*** can occur if the student has used a tense in one sentence that differs from the tense used in the majority of the sentences in the paragraph. For example, the first three sentences may be written in the past tense, while the fourth sentence is written in the future tense. The fourth sentence is in error.*

* In some cases a change in the point of view or tense is appropriate. The scorer must use her judgment with regard to whether the change is appropriate for the meaning of the paragraph or whether it consitutes an error.

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Place your tally mark in the box under the line number that corresponds to the line on which the inappropriate verb tense occurs.

Sequence error. A ***sequence error*** can occur if the student uses an inappropriate transition that does not relate to the preceding transitions in the paragraph. For example, if the student uses the transitions, "Most importantly...", "The next most important...", "In addition...", and "The least important...", "In addition..." may be a sequence error, depending on the content of the sentences. Place the tally mark in the box under the line number corresponding to the line on which the first word of the inappropriate transition occurs.

Organization error. An ***organization error*** can occur if the student omits a topic sentence or a clincher sentence or has fewer than four detail sentences in the paragraph. (See the *Paragraph Writing Strategy* for definitions of these kinds of sentences.) Place your tally mark under the line number on which the sentence ***should have*** begun. For example, if a topic sentence is missing, place a tally mark under line 1; if a clincher sentence is missing, place a tally mark under the line number corresponding to the line on which the first word of the clincher sentence should have appeared. Make note of the omission directly on the student's product (e.g., "Clincher sentence is missing.").

Capitalization Errors

In general, capital letters should either be larger than the lower-case letters (usually they are twice the size of lower-case letters) and/or be formed differently than the lower-case letters. If a letter is formed differently than the corresponding lower-case letter but is small, it is allowable as a capital letter. If you have doubts about a capital letter, look for other examples of the same letter in the student's writing in either upper or lower case. If the letter is small and of the same form as a lower-case letter, count it as an error.

A ***capitalization error*** is scored if the student makes any of the following errors.

First word of a sentence is not capitalized. This type of error is scored for each instance in which a capital letter should have been used at the beginning of the first word of a sentence. The first word of a sentence is designated either by the first word of a paragraph or by an ending punctuation mark that occurs immediately before the first word of a subsequent sentence. (Note: ***Do not*** score a capitalization error for the second (or third) clause of a run-on sentence. A run-on sentence is scored as a sentence error only.) Place your tally mark under the line number corresponding to the line on which the capital letter should have occurred.

Proper noun is not capitalized. This type of error is scored for each instance in which a capital letter should have been used in conjunction with a proper noun. If the proper noun consists of two words (e.g., Washington Monument) and neither is capitalized, score two errors. Place each tally mark under the line number corresponding to the line on which a capital letter should have appeared.

Capital letter is improperly used. Score this type of error each time the student uses a capital letter when a lower-case letter should have been used. (Note: Sometimes students exhibit an idiosyncrasy in their writing. For example, a student may print his letters, and every "a" appears as a capital "A" but is the same size as the other lower-case letters. Normally, each instance of such an idiosyncrasy should ***not*** be counted as an error as long as the letter is the same size as other lower-case letters. Use your judgment with regard to how much this idiosyncrasy interferes with the student's written communication. Give the student feedback accordingly.) Place your tally mark in the box under the line number corresponding to the line on which the inappropriate capital letter appears.

Overall Appearance Errors

An ***overall appearance error*** is scored if the student makes any of the following errors. Place your tally mark in the box under the line number that corresponds to the line on which the error occurs.

Handwriting error. This type of error occurs when a word is illegible. Typically, a word becomes illegible when its letters are poorly formed or when letters are jumbled or crowded together such that they touch and run together. Score a word as illegible if you have to look at it a second (or third) time to decipher it and if it cannot be deciphered when it is isolated from the rest of the sentence in which it occurs.

Do not score a word as a handwriting error if:

- The word is difficult to read because it is spelled wrong (e.g., contains an extra letter, extra loop that looks like an extra letter, substituted letters, mixed up letters). Score this as a spelling error.
- The word is difficult to read because of a writing idiosyncrasy. (Look at the rest of the writing sample to see if the problem occurs elsewhere. If so, and if you judge the idiosyncrasy to interfere with the student's written

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communication, give the student appropriate feedback.) ***Do not*** score every instance of the writing idiosyncrasy as an error.

- The word is difficult to read because of a messy error (e.g., write-over, crowding, etc.—see below). Score this as a messy error.

Spacing error. This type of error can occur: (a) when the student has used cursive writing and has no break in the writing stroke between two words; (b) when the student has left less than one letter space between words; (c) when the student has broken a word into two parts by placing more than a letter space between the two word parts or by placing the two word parts on different lines without using a hyphen (put your tally mark for this error under the line number corresponding to the line on which the first word part appears); (d) when the student has left a large gap between two words (i.e., more than three letter spaces) or two sentences (i.e., more than four letter spaces); or (e) when the student has left less than two letter spaces between sentences.

Margin error. A ***margin error*** can occur if the student has not indented the first word of the first sentence of a paragraph at least three letter spaces from the left margin of the paper. (If a margin line is not printed on the paper or if the student has used an imaginary margin line that is different from the printed line, draw a line down the left edge of the majority of lines of writing on the paper. This will serve as the margin line from which you can make your judgments.) A margin error can also occur if any of the remaining lines of writing begins more than one letter space to the right of the margin line or overlaps the margin line by more than half of a letter.

Messy error. This type of error is scored if the student has destroyed the neatness of the product in some way. Messy errors can include the following: (a) write-overs, where the student has written letters or a word more than once in the same place resulting in a double or triple image; (b) smudges, where the student has left a black mark by erasing something or has gotten dirt on the paper; (c) crowding, where the student has crowded a word at the right end of a line; (d) cross-outs, where the student has crossed out a word; (e) insertions, where the student has inserted a word(s) between two regularly spaced words or has drawn arrows or carets to indicate the insertion of a word(s); or (f) a rip or frayed edge in the paper.

Punctuation Errors

If one of the following punctuation errors occurs, place your tally mark under the line number corresponding to the line on which the error appears.

End punctuation is missing. This error occurs *only* when a complete sentence is followed by another sentence that starts with a capital letter and no end punctuation mark appears between the two sentences. (Note: A punctuation error is not scored for a run-on sentence. A run-on sentence is scored as a sentence error.)

End punctuation is wrong. This error occurs when an inappropriate punctuation mark is used at the end of a sentence (e.g., if the student has used a period where a question mark is needed, or if a comma is used where there should be a period because it is followed by a capitalized word and a complete sentence).

A comma is missing. This error occurs when the student has omitted a comma in a compound or compound-complex sentence with a coordinating conjunction, or in a complex or compound-complex sentence where a dependent clause appears before an independent clause. It also occurs in complex or compound-complex sentences with adverb clauses when the adverb clause is not restrictive.* This type of error also occurs when a student omits a comma to separate two items in a series of items. There should be a comma after each item in a series, but the comma before the "and" in the series is optional (e.g., "They bought ice cream, strawberries, cake and candles" and "They bought ice cream, strawberries, cake, and candles" are both correct). Do not count an omitted comma before the "and" in the series as an error.

A comma is used instead of a semicolon or vice versa. This type of error occurs when the student uses a comma instead of a semicolon as in a compound sentence or compound-complex sentence. It also occurs when a student uses a semicolon to separate one-word items in a series or in front of a coordinating conjunction in a compound sentence. (Note: When a semicolon and a comma have been omitted between two independent clauses that are not joined by a coordinating conjunction, the error should be scored as a sentence error [a run-on sentence].)

Spelling Errors

A ***spelling error*** should be scored if a word is not spelled as it is spelled in a standard English dictionary. A spelling error has been made if a word contains additional letters, if letters are omitted, if letters are in the wrong

* Only apply this error rule on adverb clauses if the student has learned to write this type of clause.

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sequence, or if loops are added within the word that look like additional letters. Place one tally mark under the line number that corresponds to the line on which the misspelled word appears. Do not count a word as misspelled if the wrong word has been used (e.g., "their" instead of "there"). If the word is spelled correctly as it appears, do not count it as a spelling error; score it as an "other error" (see below).

Other Errors

Other errors students will make are infrequent, idiosyncratic, and hence are not included in the above definitions. Examples include word usage errors (e.g., using the word, "to," instead of "too") and subject/verb agreement errors (e.g., stating, "You was my friend.", instead of "You were my friend."). If you notice an error that does not fit any of the other categories, place a tally mark under the line number corresponding to the line on which this error occurs and next to the label "Other Errors".

Note:

Sometimes ***two different errors*** will occur in the same word or even in the same letter. It is appropriate to score two errors. For example, a word may contain a spelling error ***and*** a smudge. Count both errors. At other times, the first word of a paragraph may not be indented ***and*** may also not be capitalized. Count both of these errors.

On the other hand, there will be times when the ***same error*** seems like it might be counted in two different ways. As a general rule, a single error should only be tallied once. Use your judgment in deciding the category under which an error should be scored. For example, in a conflict between a spelling error and a messy error, determine whether the word is spelled correctly elsewhere. If so, count the error as a messy error. If it is misspelled elsewhere, count it as a spelling error.

For a sample of a student's writing and an illustration of how errors within that sample should be scored, see the *Pretest Sample* on p. 74, the *Example Error Monitoring Score Sheet* on p. 75, and the *Scoring Explanation* on pp. 76-78.

Calculation Procedures for the Number of Errors per Word

Refer to the *Example Error Monitoring Score Sheet* (p. 75) as you read this explanation. The procedure for calculating the number of errors per word is as follows.

First, count the number of errors tallied in each category of errors and record each category total in the appropriate box in the column labeled "Category Totals". On the *Example Error Monitoring Score Sheet*, 2 sentence errors, 2 paragraph errors, 3 capitalization errors, 20 overall appearance errors, 4 punctuation errors, 2 spelling errors, and 8 other errors were recorded in the "Category of Errors" column.

Second, add these subtotals to obtain the total number of errors in a student's product. Record this total in the box labeled "Total Errors" at the bottom of the "Category Totals" column. On the *Example Error Monitoring Score Sheet*, a total of 41 errors was recorded.

Third, to calculate the number of errors per word in a product, write the total number of errors in the numerator box on the top of the fraction under the label "Calculating the Score". Next, put the total number of words in the student's product in the denominator box. Divide the denominator into the numerator to obtain the score. Write the score on the blank in front of the label "Errors per Word." This score must be ***less*** than .05 errors per word for a student to reach mastery.

On the *Example Error Monitoring Score Sheet*, a total of 41 errors was recorded and there was a total of 105 words in the written product. These numbers were recorded in the appropriate boxes and the calculations were carried out (41 was divided by 105) to obtain the score of .39 errors per word. This is the score that is graphed on the student's *Error Monitoring Progress Chart*.

Progress Chart Explanation for the *Error Monitoring Progress Chart*

The number of errors per word in written products is plotted on the *Error Monitoring Progress Chart* for the pretest, grade-appropriate practice attempts, the posttest, activation assignments, activation reports, and maintenance probes. For example, the result from the *Example Error Monitoring Score Sheet* (p. 75) is plotted on the *Example Error Monitoring Progress Chart* (p. 79). The student, Cody, had a score of .39 errors per word on the pretest. This score is plotted with a dot on the vertical line above the label "Pretest."

Scores for consecutive practice attempts should be connected as shown in the *Example Error Monitoring Progress Chart*.

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Student's Name: _____ Pretest: ____ Practice: ____ Posttest: ____

Date: _____ Activation: ____ Maintenance: ____

ERROR MONITORING SCORE SHEET

Writing Errors	Line Number 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Category Totals
Sentence																
Paragraph																
Capitalization																
Overall Appearance																
Punctuation																
Spelling																
Other																
															Total Errors →	

Calculating the Score:

$$\frac{\text{Total Number of Errors}}{\text{Total Number of Words}} = \frac{\square}{\square} = \_\_\_\_\_ \text{ Errors Per Word}$$

Mastery - less than .05 errors per word

Scoring Definitions for DWIM Theme Writing

(1) Introductory Paragraph

Topic Sentence

- **Student gets 8 points for the topic sentence if...**
  1. Sentence is complete, and
  2. Sentence mentions the topic of the essay as specified in the prompt, and
  3. Sentence states the writer's idea for the topic, and
  4. The writer s idea is related to the topic/prompt

- **Student gets 4 points for the topic sentence if...**
  1. Sentence is complete, and
  2. Sentence states the writer's idea which is related to the topic/prompt but not mention the topic of the essay, or
  3. Sentence mentions the topic of the essay but not the writer's idea for the topic

- **Student gets 0 points for the topic sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not mention the topic or the writer's idea for the topic, or
  3. Sentence is completely off topic

Detail Sentences (score 3)

- **Student gets 2 points for each of the detail sentences if...**
  1. Sentence is complete, and
  2. Sentence mentions the setting (place or time), or
  3. Sentence describes the setting (weather), or
  4. Sentence mentions the characters (people) involved, or
  5. Sentence describes the relation of the character(s) to the writer, or
  6. Sentence describes the writer's emotions, or
  7. Sentence introduces the writer s idea with background information, or
  8. Sentence is related the idea and/or topic specified in the Topic Sentence

- **Student gets 0 points for each of the detail sentences if...**
  1. Sentence is not complete, or
  2. Sentence is not related to the setting (place or time), or
  3. Sentence does not describes the weather, or
  4. Sentence does not mention the characters (people) involved, or
  5. Sentence does not describe the relationship of the character(s) to the writer, or
  6. Sentence does not describe the writer's emotion, or
  7. Sentence does not introduce the idea with background information of some type, or

8. Sentence is not related the idea and/or topic

Lead-in Sentence

- **Student gets 8 points for the lead-in sentence if...**
  1. Sentence is complete, and
  2. Sentence gives a hint/clue of what comes next, and
  3. Clue/hint is related to the main event, and
  4. Sentence fits the topic of/prompt for the essay

- **Student gets 4 points for the lead-in sentence if...**
  1. Sentence is complete, and
  2. Sentence fits the topic of the essay, and
  3. Sentence gives a hint/clue of what comes next but not related to the main event, or
  4. Sentence is related to the main event but not in the form of a hint/clue

- **Student gets 0 points for the lead-in sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not give a hint/clue of what happens next, and
  3. Sentence is not related to the main event, or
  4. Sentence is completely off topic

(2) Main Event Paragraph

Topic/transition sentence

- **Student gets 8 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence transitions from the previous lead-in sentence, and
  3. Sentence leads into the main event of the paragraph, and
  4. The main event is related to the topic/prompt

- **Student gets 4 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence leads into the main event of the paragraph, and
  3. The main event is related to the topic
- **Student gets 0 points for the topic/transition sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not mention or lead into the main event of the paragraph, or
  3. Sentence is completely off topic

Detail Sentences (score 4)

- **Student gets 2 points for each of the detail sentences if...**
  1. Sentence is complete, and
  2. Sentence is related the idea and/or topic, and
  3. Sentence describes what happened during the main event, or

4. Sentence describes what the writer did during the main event, or
5. Sentence describes what the writer saw during the main event, or
6. Sentence describes the best/worst experience during the main event, and
7. Sentence is in a logical order with the other sentences in the paragraph.

- **Student gets 0 points for each of the detail sentences if...**
  1. Sentence is not complete, or
  2. Sentence does not add to what happened during the main event, or
  3. Sentence does not describe what the writer did or saw during the main event, or
  4. Sentence does not add information about the best/worst experience during the main event, or
  5. Sentence is not related to the idea and/or topic, or
  6. Sentence is not in a logical sequence related to other detail sentences in the paragraph.

(3) Resolution/Conclusion Paragraph

Topic/transition Sentence

- **Student gets 8 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence transitions from the previous paragraph, and
  3. Sentence states the conclusion of the main event or leads into the conclusion of the main event, and
  4. The conclusion is related to the topic/prompt and the writer s idea

- **Student gets 4 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence states the conclusion or leads into the conclusion of the main event, and
  3. The conclusion is related to the topic/prompt and the writer's idea

- **Student gets 0 points for the topic/transition sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not state the conclusion of the main event or lead into the conclusion of the main event, or
  3. Sentence is completely off topic

Detail Sentences (score 4)

- **Student gets 2 points for each of the detail sentences if...**
  1. Sentence is complete, and
  2. Sentence is related the idea and/or topic, and
  3. Sentences describes what happened at the end of the main event, or
  4. Sentence adds to the resolution of the problem from the main event, and
  5. Sentence is in logical order in relation to other sentences in the paragraph

- **Student gets 0 points for each of the detail sentences if...**
  1. Sentence is not complete, or
  2. Sentence does not add to the conclusion, or
  3. Sentence does not add to the resolution of the problem, or
  4. Sentence is not related to the idea and/or topic, or
  5. Sentence is not in a logical order in relation to other sentences in the paragraph

(4) Reaction/Emotion Paragraph
Topic/Transition Sentence

- **Student gets 8 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence transitions from the previous paragraph, and
  3. Sentence states the writer's emotion or reactions to the main event, and
  4. Sentence fits the topic of the essay and the writer s idea

- **Student gets 4 points for the topic/transition sentence if...**
  1. Sentence is complete, and
  2. Sentence states the writer's emotion or reactions to the main event, and
  3. Sentence fits the topic of the essay and the writer's idea

- **Student gets 0 points for the topic/transition sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not state the writer's emotion or reactions to the main event, or
  3. Sentence is completely off topic

Detail Sentences (score 3)

- **Student gets 2 points for each of the detail sentences if...**
  1. Sentence is complete, and
  2. Sentence is related to the writer's emotions/reactions to the main event, and
  3. Sentence is related the idea and/or topic, and
  4. Sentence is in a logical order in relation to other details sentences in the paragraph

- **Student gets 0 points for each of the detail sentences if...**
  1. Sentence is not complete, or
  2. Sentence is not related to the writer's emotions/reactions to the main event, or
  3. Sentence is not related to the idea and/or topic
  4. Sentence is not in a logical order in relation to other details sentences in the paragraph

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Concluding Sentence (score final sentence or last two sentences of story)

- **Student gets 8 points for the concluding sentence if...**
  1. Sentence is complete, and
  2. Sentence summarizes the writer's idea and/or emotions/reactions, and
  3. Sentence fits the topic/prompt of the essay, and
  4. Sentence closes the story gracefully, and

- **Student gets 4 points for the concluding sentence if...**
  1. Sentence is complete, and
  2. Sentence summarizes the writer's ideas and/or emotions/reactions, or
  3. Sentence fits the topic/prompt of the essay, or

- **Student gets 0 points for the concluding sentence if...**
  1. Sentence is not complete, or
  2. Sentence does not summarize the writer's ideas and/or emotions/reactions, or
  3. Sentence does not fit the topic/prompt of the essay

Six Traits of Writing Rubric

GRADE 5: NARRATIVE WRITING RUBRIC

TRAIT: IDEAS AND CONTENT

Rating of 5 (Strong): This paper is clear, focused, and interesting. It holds the reader's attention. Relevant anecdotes and details enrich the central theme or story line. Ideas are fresh and original.

- The writer seems to be writing from experiences and shows insight: a good sense of how events unfold, how people respond to life and to each other.
- Supporting, relevant, telling details give the reader important information that he or she could not personally bring to the text.
- The writing has balance: main ideas stand out.
- The writer seems in control and develops the topic in an enlightening, entertaining way.
- The writer works with and shapes ideas, making connections and sharing insights.

Rating of 3 (Developing): The paper is clear and focused. The topic shows promise, even though development is still limited, sketchy or general.

- The writer is beginning to define the topic, but is not there yet. It is pretty easy to see where the writer is headed, though more information is needed to "fill in the blanks."
- The writer does seem to be writing from experience, but has some trouble going from general observations to specifics.
- Ideas are reasonably clear and purposeful, even though they may not be explicit, detailed, personalized, or expanded to show a depth of understanding.
- Support is attempted, but doesn't go far enough yet in expanding, clarifying, or adding new insights.
- Themes or main points seem a blend of the original and the predictable.

Rating of 1 (Beginning): As yet, the paper has no clear sense of purpose or central theme. To extract meaning from the text, the reader must make inferences based on sketchy details. More than one of the following problems is likely to be evident:

- Information is very limited or unclear.
- The text is very repetitious, or reads like a collection of random thoughts from which no central theme emerges.
- Everything seems as important as everything else; the reader has a hard time sifting out what's critical.
- The writer has not yet begun to define the topic in a meaningful or personal way.
- The writer may still be in search of a real topic, or sense of direction to guide development.

TRAIT: ORGANIZATION

Rating of 5 (Strong): The organization enhances and showcases the central idea or theme. The order, structure, or presentation is compelling and moves the reader through the text.

- Details seem to fit where they're placed; sequencing is logical and effective.
- An inviting introduction draws the reader in and a satisfying conclusion leaves the reader with a sense of resolution.
- Pacing is very well controlled; the writer delivers needed information at just the right moment, then moves on.
- Transitions are smooth and weave the separate threads of meaning into one cohesive whole.
- Organization flows so smoothly the reader hardly thinks about it.

Rating of 3 (Developing): The organizational structure is strong enough to move the reader from point to point without undue confusion.

- The paper has a recognizable introduction and conclusion. The introduction may not create a strong sense of anticipation; the conclusion may not leave the reader with a satisfying sense of resolution.
- Sequencing is usually logical. It may sometimes be too obvious, or otherwise ineffective.
- Pacing is fairly well controlled, though the writer sometimes spurts ahead too quickly or spends too much time on the obvious.
- Transitions often work well; at times though, connections between ideas are fuzzy or call for inferences.
- Despite a few problems, the organization does not seriously get in the way of the main point or story-line.

Rating of 1 (Beginning): The writing lacks a clear sense of direction. Ideas, details or events seem strung together in a random, haphazard fashion—or else there is no identifiable internal structure at all. More than one of the following problems is likely to be evident:

- The writer has not yet drafted a real lead or conclusion.
- Transitions are not yet clearly defined; connections between ideas seem confusing or incomplete.
- Sequencing, if it exists, needs work.
- Pacing feels awkward, with lots of time spent on minor details or big, hard-to-follow leaps from point to point.
- Lack of organization makes it hard for the reader to get a grip on the main point or story-line.

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GRADE 5: NARRATIVE WRITING RUBRIC

TRAIT: VOICE

Rating of 5 (Strong): The writer speaks directly to the reader in a way that is individualistic, expressive, and engaging. Clearly, the writer is involved in the text and is writing to be read.

- The paper is honest and written from the heart. It has the ring of conviction.
- The language is natural yet provocative; it brings the topic to life.
- The reader feels a strong sense of interaction with the writer and senses the person behind the words.
- The projected tone and voice give flavor to the writer's message and seem very appropriate for the purpose and audience.

Rating of 3 (Developing): The writer seems sincere, but not genuinely engaged, committed, or involved. The result is pleasant and sometimes even personable, but short of compelling.

- The writing communicates in an earnest, pleasing manner. Moments here and there amuse, surprise, delight or move the reader.
- Voice may emerge strongly on occasion, then retreat behind general, vague, tentative, or abstract language.
- The writing hides as much of the writer as it reveals.
- The writer seems aware of an audience, but often fails to weigh words carefully, or stands at a distance and avoids risk.

Rating of 1 (Beginning): The writer seems indifferent, uninvolved or distanced from the topic and/or the audience. As a result, the writing is flat, lifeless or mechanical; depending on the topic, it may be overly technical or jargonistic. More than one of the following problems is likely to be evident:

- The reader has a hard time sensing the writer behind the words. The writer does not seem to reach out to an audience, or make use of voice to connect with that audience.
- The writer speaks in a kind of monotone that tends to flatten all potential high's and low's of the message.
- The writing communicates on a functional level, with no apparent attempt to move or involve the reader.
- The writer is not yet sufficiently engaged or at home with the topic to take risks or share her/himself.

TRAIT: WORD CHOICE

Rating of 5 (Strong): Words convey the intended message in an interesting, precise, and natural way. The writing is full and rich, yet concise.

- Words are specific and accurate; they seem just right.
- Imagery is strong.
- Powerful verbs give the writing energy.
- Striking words and phrases often catch the reader's eye, but the language is natural and never overdone.
- Expression is fresh and appealing; slang is used sparingly.

Rating of 3 (Developing): The language is functional, even if it lacks punch; it does get the message across.

- Words are almost always correct and adequate (though not necessarily precise); it is easy to understand what the writer means.
- Familiar words and phrases communicate, but rarely capture the reader's imagination. The writer seems reluctant to stretch.
- The writer usually avoids experimenting; however, the paper may have one or two fine moments.
- Attempts at colorful language often come close to the mark, but may seem overdone or out of place.
- A few energetic verbs liven things up now and then; the reader yearns for more.
- The writer may lean a little on redundancy, or slip in a cliche—but never relies on these crutches to the point of annoyance.

Rating of 1 (Beginning): The writer struggles with a limited vocabulary, searching for words to convey meaning. More than one of the following problems is likely to be evident:

- Language is so vague and abstract (e.g., *It was a fun time, It was nice and stuff*) that only the most general message comes through.
- Persistent redundancy clouds the message and distracts the reader.
- Cliches or jargon serves as a crutch.
- Words are used incorrectly in more than one or two cases, sometimes making the message hard to decipher.
- The writer is not yet selecting words that would help the reader to have a better understanding.

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GRADE 5: NARRATIVE WRITING RUBRIC

TRAIT: SENTENCE FLUENCY

Rating of 5 (Strong): The writing has an easy flow and rhythm when read aloud. Sentences are well built, with consistently strong and varied structure that makes expressive oral reading easy and enjoyable.

- Sentence structure reflects logic and sense, helping to show how ideas relate. Purposeful sentence beginnings guide the reader readily from one sentence to another.
- The writing sounds natural and fluent; it glides along with one sentence flowing effortlessly into the next.
- Sentences display an effective combination of power and grace.
- Variation in sentence structure and length adds interest to the text.
- Fragments, if used at all, work well.
- Dialogue, if used, sounds natural.

Rating of 3 (Developing): The text hums along efficiently for the most part, though it may lack a certain rhythm or grace. It tends to be more pleasant or businesslike than musical, more mechanical than fluid.

- The writer shows good control over simple sentence structure, more variable control over complex sentence structure.
- Sentences may not seem skillfully crafted or musical, but they are grammatical and solid. They hang together. They get the job done.
- The writer may tend to favor a particular pattern (e.g., subject-verb, subject-verb), but there is at least *some* variation in sentence length and structure (sentence beginnings are NOT all alike).
- The reader sometimes has to hunt for clues (e.g., connecting words like *however, therefore, naturally, on the other hand, to be specific, for example, next, first of all, later, still,* etc.) that show how one sentence leads into the next.
- Some parts of the text invite expressive oral reading; others may be a little stiff, choppy or awkward. Overall, though, it's pretty easy to read this paper aloud if you practice.

Rating of 1 (Beginning): The paper is difficult to follow or read aloud. Most sentences tend to be choppy, incomplete, rambling, or awkward; they need work. More than one of the following problems is likely to be evident:

- Sentences do not sound natural, the way someone might speak. Word patterns are often jarring or irregular, forcing the reader to pause or read over.
- Sentence structure tends to obscure meaning, rather than showing the reader how ideas relate.
- Word patterns are very monotonous (e.g., subject-verb, subject-verb-object). There is little or no real variety in length or structure.
- Sentences may be very choppy. Or, words may run together in one giant "sentence" linked by "*and*'s" or other connectives.
- The text does not invite expressive oral reading.

TRAIT: CONVENTIONS

Rating of 5 (Strong): The writer demonstrates a good grasp of standard writing conventions (e.g., grammar, capitalization, punctuation, usage, spelling, paragraphing) and uses them effectively to enhance readability. Errors tend to be so few and minor the reader can easily skim right over them unless specifically searching for them.

- Paragraphing tends to be sound and to reinforce the organizational structure.
- Grammar and usage are correct and contribute to clarity and style.
- Punctuation is smooth and guides the reader through the text.
- Spelling is generally correct, even on more difficult words.
- The writer may manipulate conventions—particularly grammar—for stylistic effect.
- The writing is sufficiently long and complex to allow the writer to show skill in using a wide range of conventions. (This criterion applies to grade 7 and up only.)
- Only light editing would be required to polish the text for publication.

Rating of 3 (Developing): The writer shows reasonable control over a limited range of standard writing conventions. However, the paper would require moderate editing prior to publication. Errors are numerous or serious enough to be somewhat distracting, but the writer handles some conventions well.

- Spelling is usually correct (or reasonably phonetic) on common words.
- Terminal (end-of-sentence) punctuation is almost always correct; internal punctuation (commas, apostrophes, semicolons) may be incorrect or missing.
- Problems with grammar usage are not serious enough to distort meaning.
- Paragraphing is attempted. Paragraphs sometimes run together or begin in the wrong places.
- The paper seems to reflect light, but not extensive or thorough, editing.

Rating of 1 (Beginning): Errors in spelling, punctuation, usage and grammar, capitalization and/or paragraphing repeatedly distract the reader and make the text difficult to read. More than one of the following problems is likely to be evident:

- The reader must read once to decode, then again for meaning.
- Spelling errors are frequent, even on common words.
- Punctuation (including terminal punctuation) is often missing or incorrect.
- Paragraphing is missing, irregular, or so frequent (e.g., every sentence) that it does not relate to organization of the text.
- Errors in grammar and usage are very noticeable, and may affect meaning.
- Extensive editing would be required to polish the text for publication.

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Story Grammar Element Checklist √√√√

Student name_____ Pretest Posttest

Circle yes or no if the student included the appropriate text structure element.

In the writing sample, does the student...

1. Include a background/setting (place, time)?	Yes	No
2. If so, does the student include details about the setting (i.e., weather)?	Yes	No
3. Is the setting introduced in the first paragraph?	Yes	No
4. Include the main person(s) involved in the story?	Yes	No
5. If so, does the student include details about the people (i.e., describe how he/she felt)?	Yes	No
6. Are the people(s) introduced in the first paragraph?	Yes	No
7. Include a main event and/or problem(s)?	Yes	No
8. If so, does the student include details of the main event/problem (i.e., what he/she saw or did)	Yes	No
9. Is the main event/problem introduced in the 2nd paragraph?	Yes	No
10. Include a conclusion to the main event and/or solution to the problem?	Yes	No
11. If so, does the student include details of the conclusion/solution (i.e., what he/she did or saw)?	Yes	No
12. Is the conclusion/solution introduced in the third paragraph?	Yes	No
13. Include the characters' emotions/reactions to the conclusion or solution to the problem?	Yes	No
14. If so, does the student include details of the emotions (i.e. why it was memorable)?	Yes	No
15. Are the emotions introduced in the last paragraph?	Yes	No

Researcher's Initials_____ TOTAL SCORE (NUMBER OF YESSES)_____

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APPROPRIATE RESPONSES FOR THE
KNOWLEDGE OF THE WRITING PROCESS INTERVIEW
SCORE ONE POINT FOR EACH RESPONSE FROM THE LIST
(Total 23 points)

BEFORE:

- Plan
- Brainstorm ideas
- Read the prompt (topic)
- Think about the topic
- Think about the audience
- think about the purpose (task, assignment)

DURING:

- Organize ideas
- think about what I will write about next
- Think about the ending
- think about word choice (words I want to use)
- write a rough draft
- Check for six traits (ideas, voice, conventions, organization, word choice, sentence fluency
- add details

AFTER:

- read my paper (aloud)
- edit
- revise
- look for missing words
- correct my mistakes (capitalization, punctuation, overall appearance, spelling)
- uses COPSS checklist
- make my paper neater (erase smudges)
- look for run-on sentences or sentence fragments
- rewrite a final draft
- Check for six traits (ideas, voice, conventions, organization, word choice, sentence fluency

Student Hope Scale

Name: _____ Date: _____

Directions: Read each sentence carefully. For each sentence, please think about how you are in most situations. Place a check inside the circle that describes YOU the best. For example, place a check (√) in the circle (O) above "None of the time" if this describes you. Or, if you are this way "All of the time" check that circle. Please answer every question. There are no right or wrong answers.

1. *I think I am doing pretty well.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

2. *I can think of many ways to get the things in life that are most important to me.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

3. *I feel tired most of the time.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

4. *I am doing just as well as other kids my age.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

5. *I lose most arguments.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

6. *When I have a problem, I can come up with lots of ways to solve it.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

7. *I worry about my health.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

8. *I think the things I have done in the past will help me in the future.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

9. *I usually worry about something.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

10. *Even when others want to quit, I know that I can find ways to solve the problem.*

O	O	O	O	O	O
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

Story Writing Self-Efficacy Scale

1. *When writing a story about myself, it is easy for me to get ideas.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

2. *When writing a story about myself, it is hard for me to organize my ideas.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

3. *When my class is asked to write stories about our lives, mine is one of the best.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

4. *When writing a story about myself, it is easy for me to get started.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

5. *When writing a story about myself, I find it easy to make all of the changes I need to make.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

6. *When writing a story about myself, it is easy for me to write my ideas into good sentences.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

7. *When writing a story about myself, it is hard for me to keep the story going .*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

8. *When writing a story about myself, it is hard for me to correct my mistakes.*

O	O	O	O	O
Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree

Research initials_____ Total Score_____

Student Satisfaction Survey

Directions: We want to know how you feel about writing in school. Fill in the box that best describes how you feel about each sentence. Remember that this is not a test so there is no right or wrong answer.

1. **Writing is boring.**
   - ☐ Totally right
   - ☐ A lot right
   - ☐ A little bit right
   - ☐ Not right or wrong
   - ☐ A little bit wrong
   - ☐ A lot wrong
   - ☐ Totally wrong

2. **I am a good writer in school.**
   - ☐ Totally right
   - ☐ A lot right
   - ☐ A little bit right
   - ☐ Not right or wrong
   - ☐ A little bit wrong
   - ☐ A lot wrong
   - ☐ Totally wrong

3. **Writing in school is fun.**
   - ☐ Totally right
   - ☐ A lot right
   - ☐ A little bit right
   - ☐ Not right or wrong
   - ☐ A little bit wrong
   - ☐ A lot wrong
   - ☐ Totally wrong

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Student Satisfaction Survey

4. Writing tests in school scare me.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

5. I am confused when I take a writing test in school.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

6. I know all of the parts that I have to include to write a story about myself.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

Student Satisfaction Survey

7. Writing stories about myself is hard.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

8. I feel proud of the stories that I write.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

9. I wish that my stories were better.

- ☐ Totally right
- ☐ A lot right
- ☐ A little bit right
- ☐ Not right or wrong
- ☐ A little bit wrong
- ☐ A lot wrong
- ☐ Totally wrong

Name_____

Teacher Satisfaction Survey

Name of Teacher_____**Date**_____

Directions: Circle the number that shows how much you agree or disagree with the statement.

1. Writing tasks are difficult for my students to master.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

2. I need more training in strategies to teach writing to my students.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

3. The Demand Writing Instruction Model intervention improved my students writing.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

4. The Demand Writing Instruction Model intervention improved the writing of my students with learning disabilities.

Highly -Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

5. Before the intervention, I was confident in my ability to prepare all of my students for the state writing assessment.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

Researcher s Name_____ Total Score _____

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Teacher Satisfaction Survey

6. The Demand Writing Instruction Model intervention prepared my students for the state writing assessment.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

7. I would like to have the Demand Writing Instructional Model intervention in the form of a teacher s manual.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

8. I would recommend the Demand Writing Instructional Model intervention to other fifth grade teachers.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

9. The Demand Writing Instructional Model intervention was difficult for my students with learning disabilities.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

10. I would use the Demand Writing Instructional Model intervention with my students in the future.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

Researcher s Name_____ Total Score _____

Caregiver Satisfaction Survey

Name of caregiver_____**Date**_____

Name of Student _____

Directions: Circle the number that shows how much you agree or disagree with the statement.

1. My child works hard on writing-related tasks.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

2. I know how to help my child improve his/her writing.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

3. Writing is easier for my child now because of the Demand Writing Instruction Model program.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

4. The Demand Writing Instruction Model program improved my child s writing.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

5. My child is more confident in his/her writing ability because of the Demand Writing Instruction Model program.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

Researcher s Name_____ **Total Score** _____

Caregiver Satisfaction Survey

6. The Demand Writing Instruction Model prepared my child for the state writing assessment.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

7. The writing homework assignments of the Demand Writing Instructional Model helped improve my child s writing.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

8. I think that more teachers should use the Demand Writing Instructional Model program to teach writing at school.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

9. The Demand Writing Instructional Model homework assignments were confusing for my child.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

10. I would recommend the Demand Writing Instructional Model program to other parents.

Highly Disagree	Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Agree	Highly Agree
1	2	3	4	5	6	7

Researcher s Name_____ Total Score _____

Appendix C

Sample Anchor Papers

1. Sample anchor papers with a score of 2
2. Sample anchor papers with a score of 4
3. Sample anchor papers with a score of 6

Sample anchor paper with a score of 2

520

When me and My MoM went to the carnival, there was this ride it was called the Mountain slide. I Made a bet with My MoM that if she scareMd on the ride we can go to the Mall for a week she got on the ride. As soon as the ride started to leave the ground My MoM acted like any other nolMal people she acted calm, peaceful but then when it went into the air and dropped down My MoM scarmed. It did the same thing over when she got off my MoM through up I laugh, she said it was,nt funny but I said its funny when you have to take me to the mall she sighed a long sigh and said let,s go I,m poped. I said I Love you mom she said I Love you too.

The End

Sample anchor paper with a score of 2

247

A happy event that happened to me was the first time I went to New York City. We drove all the way there with my dad out first stop was Harrisburg Penn. My dad had drove 16 hours strait when we got there we went to the capitial building but it wasn't what we thought it would be. So we hit the road to New York City. When you get there on a foggy day the first thing you see is the Empire State Building and The World Trade Center befor you see any other building in Manhattan Suddenly the Crysler and the

Sample anchor paper with a score of 4

239

My essay is on losing something important. It took place in Pennsyl-vania. (where my grandma lives.) My Grandma was the main person.

She was in her house cleaning when she spilled a bowl of thump tacks. She didnt know, but one of them went in her heel. She had Artheridus though. And she didnt feel it. Plus she had counted them one time, and knew one was missing.

So she called my Grampa at work, and he came home. Then they started looking. Then with three days gone, my Grampa fiannaly said, "Sit down, maybe its in your foot some where it was there. He pulled it out, but it was too late. It caused an infection in her heel. It was a deadly infection.

So she went too the hospital. My family heard. So my dad went to the hospital where she was. She died. It was the worst night ever. The end

Sample anchor paper with a score of 4

112

Losing my cat was the worse thing ever to happen to me!

On the first day we got the cat we kept him in a box. One day he got out of the box!

I was upstairs drawing when Connor (my brother) came running up the stairs!

"What is it?" I asked.

"Benny got out of his box" Connor painted. (Jest so you know Benny is my cat.)

I ran down stairs with Connor right beind me.

"See?" Connor said pointing to the box.

And he was right, the box was emity!

We didn't see Benny for a long time. We moved his food upsirs hoping we would see him.

It worked. Benny finily warmed up to me and Connor. (But he likes Mom beter!)

Now everyday I can count on seeing Benny sleeping with my dog on my bed or playing with him on the floor!

The End!

Sample anchor paper with a score of 6

541

A Special Gift

One time I got a really special gift was when I got a puppy. It was my birthday, so I got his as a present from my mom and dad. My mom and dad told me it was a boy. I was so happy I hugged both of them. I didn't know it was going to be a Great Dane Dog.

After the party I went to my room to play with him. I tried to teach him to play fetch, play dead, and roll over. He learned fetch and roll over, but he couldn't play dead. As he got bigger so did I. I didn't know he would get so big.

After the years passed he finally learned how to play dead. He was three years old and already as big as my dad on his hind legs. He was getting huge. Every day when I came home from school he jumped on top of me. I didn't know he would be so loyal.

After even more years passed he started to get old. He was still getting bigger though. I thought he would never stop growing. He got so old that he finally died. I still remember him to this day.

Sample anchor paper with a score of 6

591

My most happy event was seeing Harry Potter and the Sorcere's Stone. It opened on November 16, 01, and my time to see the movie was at 6:30. Of course I had to go to school but mom got tickets.

The story begins with my mother dropping me off at school and then she was off to the box office. I was so excited that I had on a Harry potter shirt and my jeans had Harry Potter down the front. So back to getting tickets when my mother got there were already 200 people in line. Fortunaly my mom saw one of her friends in the very front so she let my mom in front of her. My mother got ticktet's I was so happy.

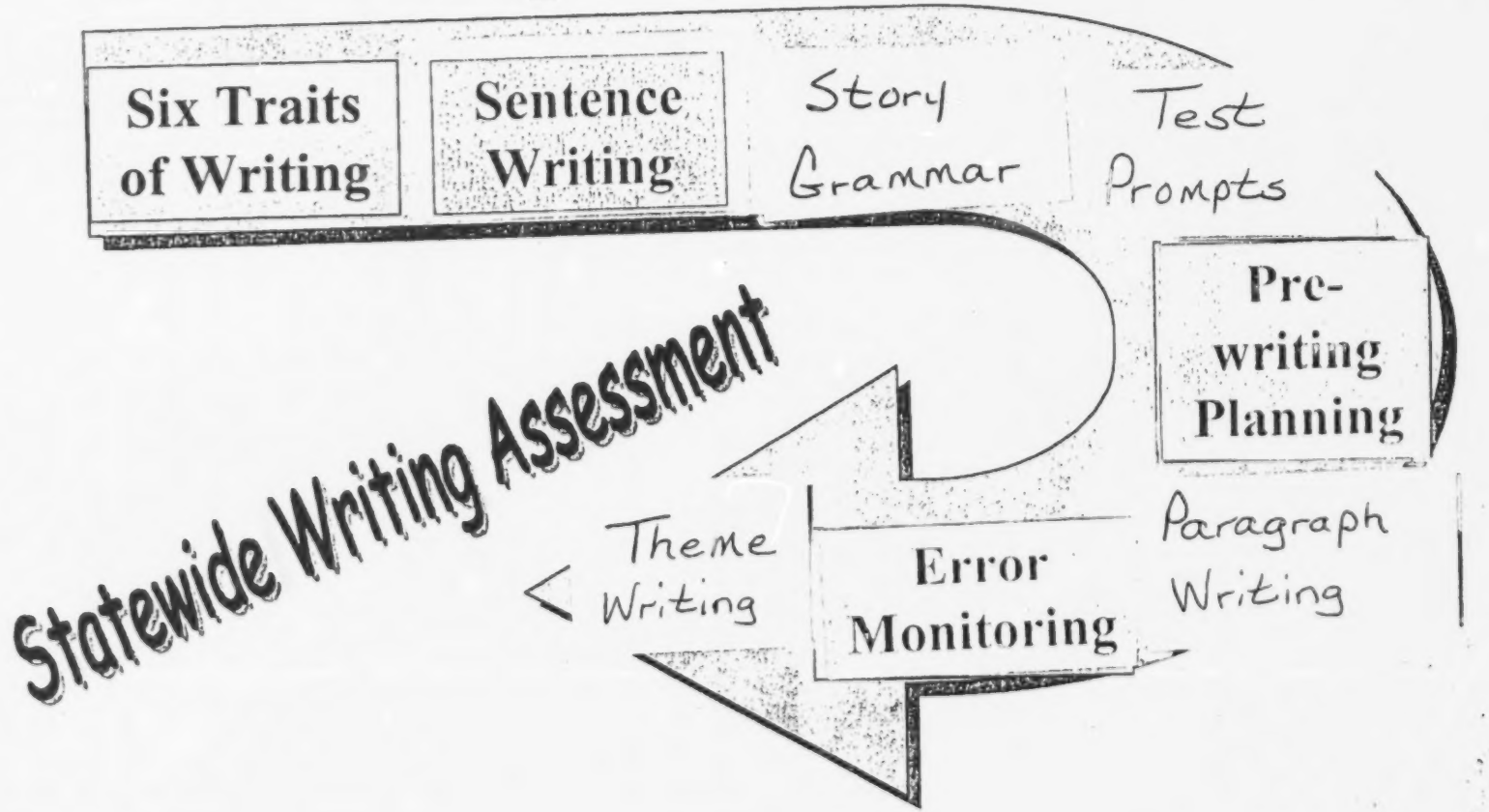
We left at 4:30 to go and get in line just to enter the theater. I was all dressed up in my Hermione Gramger outfit that my Grandma had made me fo Halloween. Since I was all dressed up the news lady did an interview with me. I was on the 10:00 news. Then after that we got into the theater. After about an hour or so the movie started.

So seeing Harry Potter is my most Happy event. The movie was great. Everything was the same as the book. I should know since I've read all four of them a thousand times each. That is my most happy event ever.

Appendix D

Sequence of Instruction

Demand Writing Instructional Model: Sequence of Instruction



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Appendix E

Homogeneity of Slopes Assumption for ANCOVA tests by Groups and Subgroups (Table)

Table E1

Homogeneity of Slopes Assumption for ANCOVA tests by Groups and Subgroups

	All Students				
Source	F	df	MSE	η2	p
Proportion of complete sentences	.151	2, 110	.351	.003	.860
Proportion of complicated sentences	3.04	2, 110	.032	.054	.052
Paragraph-writing score	.383	2, 110	.017	.007	.683
Theme-writing score	2.51	2, 110	.019	.045	.086
Writing-quality score	1.74	2, 110	1.82	.003	.840
Text-structure score	.286	2, 110	6.79	.005	.752
Pre-writing planning time score	.836	2, 110	19.7	.016	.436
Essay length score	.614	2, 110	4987.4	.011	.543
Hope score	.315	2, 110	28.47	.006	.731

Table E1, continued

Source	Students with Learning Disabilities				
	F	df	MSE	η2	p
Proportion of complete sentences	.072	2, 11	.05	.018	.931
Proportion of complicated sentences	2.18	2, 11	.025	.352	.176
Paragraph-writing score	.246	2, 11	.022	.058	.788
Theme-writing score	.466	2, 11	.022	.104	.643
Text-structure score	.537	2, 11	9.16	.118	.604
Pre-writing planning time score	.026	2, 11	28.6	.003	.875
Essay length score	.146	2, 11	5801.9	.035	.867
Hope score	.147	2, 11	29.55	.036	.865
Writing self-efficacy score	2.48	2, 11	29.4	.499	.178

Table E1, continued

Source	Students with Field-Dependent Cognitive Styles				
	F	df	MSE	η2	p
Proportion of complete sentences	190	2, 47	.770	.009	.828
Proportion of complicated sentences	856	2, 47	.032	.037	.432
Paragraph-writing score	.271	2, 47	.019	.012	.764
Theme-writing score	2.74	2, 47	.018	.111	.076
Writing-quality score	.261	2, 47	1.96	.012	.772
Text-structure score	.118	2, 47	7.05	.005	.889
Pre-writing planning time score	.643	2, 47	21.9	.014	.427
Essay length score	1.8	2, 47	5056.4	.075	.178
Hope score	.399	2, 47	29.05	.018	.673
Writing self-efficacy score	2.48	2, 47	32.3	.108	.096

Appendix F

Dependent Variables Which Yielded Non-Significant Results by Groups and Subgroups (Table)

Table F1

Dependent Variables Which Yielded Non-Significant Results by Groups and Subgroups

	All Students				
Source	F	df	MSE	η2	p
Proportion of complete sentences	1.11	2, 110	.346	.020	.331
Essay-length score	2.24	2, 110	4952.2	.039	.112
Hope score	1.81	2, 110	28.11	.032	.169
Writing self-efficacy score	.069	2, 110	--	.018	.934
	Students with Learning Disabilities				
Source	F	df	MSE	η2	p
Proportion of complete sentences	1.42	2, 11	.031	.221	.287
Paragraph-writing score	2.51	2, 11	.019	.334	.131
Writing-quality score	.159	2, 11	--	.028	.855
Statewide writing assessment*	.917	14, 10	--	.562	.570
Text-structure score	1.27	2, 11	8.3	.202	.323
Pre-writing planning time	2.77	2, 11	28.6	.357	.110

Table F1, continued

Source	F	df	MSE	η2	p
	Students with Learning Disabilities				
Essay-length score	1.97	2, 11	4810.6	.282	.190
Hope score	.250	2, 11	24.5	.048	.784
Writing self-efficacy score	.069	2, 11	41.9	.019	.934
Student satisfaction**	3.29	2, 10	--	.971	.258
	Students with Field-Dependent Cognitive Styles				
Source	F	df	MSE	η2	p
Proportion of complete sentences	.071	2, 47	.743	.003	.932
Essay length score	1.59	2, 47	5230.7	.065	.216
Hope score	.538	2, 47	28.3	.023	.588
Writing self-efficacy score	1.49	2, 47	34.5	.065	.235

Note. * One-way multivariate of analysis was conducted, Wilks' Λ=.192, **One-way multivariate of analysis was conducted, Wilks' Λ=.001. Dashes represent where a one-way analysis of variance was conducted.

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Table F2

Pretest and Posttest Scores for Writing-Affect Measures by Groups and Subgroups

	Group A		Group B		Group C	
	pretest	posttest	pretest	posttest	pretest	posttest
Variable	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
All Students						
Hope score	19.3 (5.1)	23.9 (6)	19.6 (5.4)	23.7 (6.7)	21.6 (4.2)	26.5 (6.3)
W.S.E. score	25.1 (5.4)	27.7 (7.4)	26.4 (5.0)	27.6 (6.4)	28.0 (5.9)	29.4 (5.9)
Students with LD						
Hope score	19.8 (6.6)	24.2 (6.3)	23.5 (4.8)	25.0 (8.0)	24.2 (5.6)	27.0 (6.6)
W.S.E. score	24.3 (6.2)	30.4 (3.2)	23.0 (4.2)	27.7 (10.8)	27.8 (2.5)	30.8 (4.5)
Students with FDCS						
Hope score	22.7 (6.3)	24.0 (6.4)	22.6 (4.5)	25.9 (5.7)	26.6 (5.4)	28.1 (6.1)
W.S.E. score	25.8 (6.4)	28.9 (6.9)	27.3 (5.5)	32.6 (3.9)	28.0 (6.9)	29.7 (6.3)

Note. Posttest scores reported are adjusted mean posttest scores. W.S.E. score is the Writing Self-Efficacy score. M = group mean, SD= group standard deviation.

Appendix G

Statistics for the Statewide Writing Assessment Traits by Groups and Subgroups (Table)

Table G1

Statistics for the Statewide Writing Assessment Traits by Groups and Subgroups

	All Students			
Trait	F	df	η2	p
Ideas and content	7.78	2, 110	.127	.001*
Voice	4.72	2, 110	.142	.011*
Organization	5.93	2, 110	.097	.004*
Conventions	8.29	2, 110	.131	.001*
Sentence fluency	9.07	2, 110	.142	.001**
Word choice	4.6	2, 110	.[illegible]7	.012**

	Students with Field-Dependent Cognitive Styles			
Trait	F	df	η2	p
Ideas and content	7.64	2, 47	.245	.001*
Voice	5.11	2, 47	.179	.010*
Organization	5.32	2, 47	.184	.008*
Conventions	4.97	2, 47	.175	.011*
Sentence fluency	6.98	2, 47	.229	.002*
Word choice	5.98	2, 47	.203	.005*

Note. * Significant differences between scores of Groups B and C. **Significant differences between scores of Groups B and A, and Groups B and C.

Appendix H

Results of Student Satisfaction Survey

1. Mean Posttest Scores for the Student Satisfaction Survey by Groups for All Students (Table)
2. ANOVA Statistics for the Student Satisfaction Survey by Groups for All Students (Table)
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Table H1

Mean Posttest Scores for the Student Satisfaction Survey By Groups for All Students

Statement	Group A Mean	Group B Mean	Group C Mean
Writing is boring.	3.8	4.0	4.6
I am a good writer in school.	5.4	4.8	5.6
Writing in school is fun.	4.7	3.5	4.9
Writing tests in school scare me.	5.1	5.3	4.6
I am confused when I take a writing test in school.	3.7	5.1	4.4
I know all of the parts that I have to include to write a story about myself.	5.3	5.8	6.2
Writing stories about myself is hard.	4.2	4.8	5.5
I feel proud of the stories that I write.	6.2	5.3	6.0
I wish that my stories were better.	3.5	2.9	3.6

Note. Student ratings applied on a seven-point scale with seven being the highest score.

Table H2

ANOVA Statistics for the Student Satisfaction Survey by Groups for All Students

Statement	All Students			
	F	df	η2	p
Writing in school is fun.	6.28	2, 110	.103	.003***
I am confused when I take a writing test in school.	4.46	2, 110	.076	.014*
Writing stories about myself is hard.	3.76	2, 110	.076	.014**
I am proud of the stories that I write.	3.76	2, 110	.056	.042

Note. * Significant differences between scores of Groups A and B (in favor of Group A). ** Significant differences between scores of Groups A and C (in favor of Group A). ***Significant differences between scores of Groups A and C, and Groups B and C (in favor of Groups A and B, respectively).

Table H3

Mean Posttest Scores for the Student Satisfaction Survey By Groups for Students with Learning Disabilities

Statement	Group A Mean	Group B Mean	Group C Mean
Writing is boring.	3.6	3.8	2.8
I am a good writer in school.	5.6	4.5	5.3
Writing in school is fun.	4.4	4.5	3.3
Writing tests in school scare me.	6.6	5.5	4.8
I am confused when I take a writing test in school.	2.8	5.0	4.5
I know all of the parts that I have to include to write a story about myself.	5.8	5.3	6.3
Writing stories about myself is hard.	5.0	3.5	7.0
I feel proud of the stories that I write.	7.0	5.0	6.0
I wish that my stories were better.	5.4	2.0	3.3

Note. Student ratings applied on a seven-point scale with seven being the highest score.

Table H4

Mean Posttest Scores for the Student Satisfaction Survey By Groups for Students with Field-Dependent Cognitive Styles

Statement	Group A Mean	Group B Mean	Group C Mean
Writing is boring.	3.8	4.5	4.8
I am a good writer in school.	5.7	5.9	5.5
Writing in school is fun.	5.4	4.2	4.7
Writing tests in school scare me.	4.1	6.1	4.6
I am confused when I take a writing test in school.	3.4	5.9	4.4
I know all of the parts that I have to include to write a story about myself.	5.3	6.7	6.0
Writing stories about myself is hard.	4.2	5.7	5.1
I feel proud of the stories that I write.	6.0	6.3	5.9
I wish that my stories were better.	3.2	2.7	4.2

Note. Student ratings applied on a seven-point scale with seven being the highest score.

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